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MEMORIAL

THEY'RE GROWING OLD

Words and Music by Robt. C. Marquis.

They're growing old these soldiers bold, Who fought for us on many a field; their muskets rust
We'll love to-day these veterans gray, And give them honor while they stay, Our debt to them.

and gath-er we ne'er can dust, No more the trusty sword they'll wield
pay Ere they from us shall pass a-way.

DUET They're grow-ing old, those hearts of gold, so soon for aye their sto-ry's told, They'll soon be gath-ered to the fold.

TUTTI

3 And if it seem but mist-y dream
To us who now are in our prime,
To them "A gleam from eyes that beam"
Tell com-rades of "that oth-er time."

4 For those who sleep and those who weep
We'll scatter here some blos-soms fair,
And ere we part, each pa-triot heart
Will for these vet-erans breathe a prayer.

Copyright, 1897, by Robt. C. Marquis.

The above beautiful song was written especially for Memorial Day. Any G. A. R. Post, choir or quartet which desires to use it will be supplied with copies of this issue free upon application. Give address and number of copies wanted.

MEMORIAL DAY.

One week from Monday next occurs Memorial Day, and in every northern and many southern States it will be observed by patriotic citizens, to keep in remembrance those who fell in the struggle for the preservation of the Union and the maintenance of a free government. As time rolls on, and the mists which enveloped the struggle are cleared away, its importance will grow in the estimation of the historian and the patriot. Its success meant the dedication of this northern continent to free government, its defeat a

broken union, a disrupted government, and human slavery an established fact in one-third the territory of the United States. Without the sacrifice of the men who laid down their lives to sustain the government, we would be a divided people, with large standing armies a necessity, and customs houses between the States. This continent would then be in the condition of Europe, and one-half the substance of the people would be required to protect themselves from the aggressions of their neighbors. Can we then be too thankful for the outcome of the struggle, or too grateful to those who ventured their lives, and lost them, in the defense of a

free government, a united country and its future peace and prosperity. Every honor paid to their memory strengthens the government, teaching lessons of patriotism and love of country. For one day let all good citizens unite in paying respect to the memories of our dead heroes, and make Memorial Day an object lesson of patriotism to boys and girls who are growing into future citizens. In every village and hamlet of Michigan, this day should be held sacred, for her sons sleep on nearly every battlefield from Gettysburg to the Gulf, and none showed a braver front or waged sterner battle with the foe. The State honors herself in honoring her dead heroes.

Farm Department.

Conducted by J. H. Brown, who lives on his farm at Climax, Mich., which is conducted as the Michigan Farmer Experiment Farm. All correspondence for this department should be sent to Climax.

"TENDING CORN" IN DRILLS.

In the last FARMER, you have the right idea of cultivating corn in drills. Last year the cultivator went ahead and tore the ground up thoroughly, and the next day I followed with the weeder. This destroyed all the young weeds, just before they became weeds, and leveled down the ridges made by the cultivator.

I used the weeder when the corn was two feet high. But when it gets so large the weeder should be used in the afternoon, to keep from breaking the corn.

GRATIOT CO., MICH. I. N. COWDREY.

As we have stated before, this will be our first attempt to grow field corn in drills, using an eleven-hoe, two-horse grain drill for drilling in the corn. We do not see why a properly constructed grain drill cannot be used for several other purposes besides drilling in wheat and oats.

Several correspondents have given us their method of handling the drill, and we shall test the matter thoroughly. It is true that nearly all the fields of drilled corn we have seen throughout the country have shown that ridged condition of the rows that we so dislike to see. We do not see why the horse weeder cannot almost entirely prevent this.

Level cultivation is best, we believe, and the alternate use of the cultivator and weeder should make this possible, up to harvest time at least. In fact, we hope to succeed in growing field corn in drills, and shall give details of work done through the season, whether we succeed or not.

May 13th, 1897.

For the Michigan Farmer. FARMING UNPROFITABLE.

We have taken the MICHIGAN FARMER a number of years, and we would not know how to get along without its advice and friendly chat.

I hope you will give me this little space in your paper. I have often thought of writing to your department, as I am much interested in everything pertaining to the farm, especially the dairy. And I want to tell you that I have received much help from your various talks on butter-making, and dairy work in general.

Perhaps I have chosen a bad subject this time, as I am interested in everything that tends to better the condition on the farms. But facts are facts, and there is too much impossible advice thrown to the ever patient farmer.

I have just read friend E. F. Brown's article: "Economy on the Farm," and I am very anxious to find out how he can make farming pay with ten hours' labor a day. I am very fond of the farm and would not wish to exchange the open free life of the country for the crowded dusty city.

But the one drawback to life on the farm is the long tiresome day's work where the farmer gets up at half past four and begins to chore; and he will have to work lively if he gets everything done and gets to the field at seven o'clock. And he usually works until six, eats his supper, which takes about half an hour, and then chores for two hours longer. I cannot figure out where he will get those five hours for self-improvement or amusement.

Surely if the farmer is in debt he must labor more than ten hours a day, if he would not get sunk. And on an average-sized farm he cannot afford to hire a man, for the man

would take all that could be spared to pay him for his work.

The farmer must study how to make the very best of his farm that soil and his means will permit, and it will puzzle him to find out what to raise that will bring money enough to pay interest and taxes. And if he is so fortunate as to be out of debt, he will wish to make his farm pay him a good interest on his investment, as well as living wages for his work. And if there is a way to do that with ten hours' labor a day on the farm, it should be made public so that we may all have a taste of that five hours leisure that would cause us to feel as if the apex of farming had been reached.

But I do not find fault with the long day's work so much as I do with the poor pay. If something is not done to keep up the prices of farm produce, farming must be removed from the ranks of remunerative, honorable occupations, and those that labor on the farm reduced to the condition of serfs.

I was told last fall, by a wise politician, that if the farmer wishes money he must raise what the people want. I asked him what that was. I am sorry to say he could not tell me. The farmer is receiving lots of good advice on how to make a success of farming, from learned men drawing a fat salary.

I am not saying but what such advice is good. The farmer usually knows how to improve his farm, but it takes money, and that is something he can't get. We are told that there is plenty of money if one has something to get it with. I think it must require diamonds to get it, as the common necessities of life have lost their value.

CLINTON Co., Mich.

For the Michigan Farmer.

FARM THOUGHTS.

"Write for the FARMER?" Well, yes, we all like to read the successes and failures of our co-laborers. Does it pay for practical scraps like me to write for the papers? Well, yes, we get the practical experience of men who are "in it."

The greater half of the farmers are not "college bred," and do not farm it on paper. I am acquainted with some men in this township who have no education, and yet are the most thrifty, enterprising, "well-to-do" farmers that we have.

We are looking, and have been for some time, for that "brilliant outlook for the future." We have also been waiting and working for that same thing, but it is a myth. The more we work and improve, the greater we find our expenses. The hardest work that our State, county and township officials do, is to create expenses for us poor devils to pay. They are blabbing more about other nations and other people's business than attending to their own people's wants. The needs of our own people they can not see.

But to my farm experience. Does it pay to feed apples to cows and hogs? Like the rest I had plenty of apples; one row of trees by the lane fence, another by the pasture lot. Apples kept falling and the cows got them. My pasture was poor; no hay but rye hay, so I fed apples all the fall, and my cows kept up a good flow of milk with no bad effects on the butter.

My eleven hogs ran in the orchard all the time; I fed no corn, and yet they got to be good block hogs.

Another experience is on spraying fruit trees. I have read the theories and practice of others, but I never have, as yet, sprayed anything, and this year, though heavily loaded, we have not had apples so free from moth and worms for years; my plums also were loaded and as good as any sprayed trees.

Regarding scientific farming, fertilizers and thoroughbred breeding, the average farmer wants to go slow; at least that is my experience for many years. All farms in Michigan cannot be laid out and worked like friend Pierce's farm on account of hills and hollows; but his plan is well worth knowing.

ALLEGAN Co., Mich.

A. G. HYDER.

For the Michigan Farmer.

LIKES STEAM.

Allow me a word to A. Williams, Clinton Co., as to windmills upon the farm. Upon my farm I use an ordinary windmill to pump water. It is pumped into a tank holding 60 barrels and is covered after the fashion of railroad tanks, with ventilation at the top.

This tank is upon a stone wall commencing five feet in the ground, extending six feet above the ground, is three feet thick and is built circular. A small door is left in the south side large enough to admit entrance, and is provided with double doors, one inside and one outside to prevent frost from entering.

About a foot from the top of the wall ventilation is supplied by laying drain tile in the wall. From this tank water can be conducted anywhere on the farm by piping. So much for water supply.

This is all the use I have for windmills anywhere. I believe in steam for the work that Mr. Williams has to do. Tread powers may be all right for some people on the farm, but they would not be of any use to me. And if friend Williams will hitch up his horse and drive over to my farm (it is no great distance) I will convince him by actual inspection of two power windmills and one tread power used for grinding, that my outfit, steam, knocks all other power, for the purposes that he desires to use power, clear out of sight.

SHIAWASSEE Co., Mich. JOHN NORTHWOOD.

For the Michigan Farmer.

A CHEAP STONE BOAT.

One of the handiest things on a farm is a good stone boat, and the cheapest way to make one is out of ordinary two-inch plank.

There is no need of going to the trouble and expense of getting stone-boat plank sawed, or hunting all over the country for some and paying a good round price for them.

A boat can be made in the following way that will be durable and strong, and last till the planks are entirely worn out. No bolts are needed; only eight-penny wire nails need be used, but be sure to use plenty of them and nail from both sides of the joint.

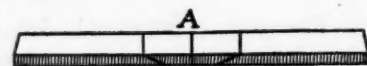


FIG. 1.

Get two planks a foot wide and 16 feet long, make a mark in the middle where to cut in two, as at A, Fig. 1. Measure about a foot each way from the center mark A, and lay off bevels as shown in Fig. 1.

Saw these blocks off with a crosscut saw, and then turn them upside down and nail them on as shown in Fig. 2. Cut some blocks, like C, out of the remaining plank, and nail them on the upper side of the boat at D. This will strengthen the joint.

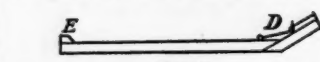
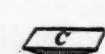


FIG. 2.

Nail on a good, tough piece in front, an inch board will do, to fasten the clevis through. Obtain a good, strong clevis, with a good ring in it, and fasten on the boat so that it cannot be taken off.

Remember, this boat can be made with eight-penny wire nails. The crosspiece at the back end, E, and the side pieces can be beveled and nailed on with eight-penny nails. Put a nail wherever you can.



You can make such a boat as this while you are going after the plank. I have one that I have used for four years. The planks are worn very thin, but the front holds yet, and has never given me any bother.

People sometimes go to a great deal of trouble to make a stone boat. They have to get plank sawed on purpose, everything cut to the right bevel at the sawmill, get a large number of bolts, countersink the heads, and work a whole day to make one. And then the neighbors will use it more than the owner, while two men with ordinary mother wit can make one of this kind in an hour or two.

Maple plank is best, but oak will do. I would sooner make one out of pine plank than to "monkey" about and hunt up regular stone-boat plank. I can make the boat and get the stone drawn before you can hunt up the plank. I. N. COWDREY.

GRATIOT Co., Mich.

[We farmers who have "been there" in the stone-boat business can appreciate what friend Cowdrey says, and the recipe is plain and easy to take.]

A stone boat or sled, and a farm truck, are implements that should find almost daily use on any farm. We use both and could not—at least we would not—get along without them.—Ed.]

For the Michigan Farmer.

CYCLONES AND PRECAUTIONS.

As the season of cyclones has come again, a few hints about the care of buildings may not be amiss. Last season this section was visited by a cyclone, and, while the writer of this was not directly in the wake, he was near enough to feel a little of its effects. After visiting the ruins the next day he concluded that it would be wise to examine the buildings for weak places.

Everything seemed all right until I came to the windmill. This mill was built in 1887. It was immediately painted and had always been kept well painted, and I naturally supposed it was all right, as I had recently put in new anchor posts and could see nothing about the derrick to cause suspicion.

But to make sure I took a hatchet and began to pound and cut for rotten spots in the derrick. One was very soon found under one of the stay boards and another at the first splice. Well I went on all over the mill in the same way. There were eight splices in the posts and all but two were damaged by rot.

Rotten places were also found under the stay-boards. I was not a little surprised, because, with the care I had given the mill, I supposed it would be sound and all right. We strengthened the derrick by spiking 2x4 scantlings on the inside of posts, from bottom to top.

I suppose the cause of the rotten spots is that the water runs down the posts and stay boards and keeps the posts damp at these points, so that they hardly dry out between showers and so rot rapidly.

I have observed that the roofs of buildings were sometimes blown off that most likely would not have been if the doors had all been closed. The wind sometimes gets under a loose shingle, and with this shingle as a leverage, rips off a large section of shingles. Or a loose board on the barn may become the entering wedge that may be followed by the destruction of the barn.

Of course, no building can withstand the full force of the regular cyclone. But with reasonable care and precaution, buildings

on the outskirts of the storm might be saved that would otherwise be damaged or destroyed.

CALHOUN Co., Mich.

[If the truth was known, more than half the owners of windmills having wooden derricks, erected a half dozen years ago, would immediately feel the necessity of strengthening the corner posts, somewhat as friend Bunnell describes above.]

It is also a good plan to dig around the anchor posts, a foot or two deep, every two years, or oftener, to see if the posts are rotting off. As soon as a post is found badly decayed it should be taken out and a new one put in. This is quite a job sometimes, but it is a mistake to leave the old anchor posts too long.

Another necessity is to carefully examine the whole mill every summer, soon after hot dry weather comes on. Go to the top and tighten every loose burr and bolt. You will sometimes find quite a number of them, especially on a wooden wheel and vane. A frequent examination would prevent many a slat from getting loose and blowing out.

Of course we cannot prevent cyclones from destroying our buildings and other property, and there seems to be more danger from this source in Michigan than there was many years ago. In fact, we consider it as necessary to insure our buildings and their contents against windstorms and cyclones, as against fire. In this section of the State, since the recent windstorms have made so much havoc, many farmers have insured in windstorm and cyclone insurance companies. We are insured against both fire and wind.—Ed.]

For the Michigan Farmer.

KIND OF CORN FOR SILO.

Would like to ask what kind of corn to plant to fill a silo, or rather what kind do most men plant?

I have a silo and have filled it two years. I raised the red cob ensilage corn, and am hardly suited with it. Don't seem to be rich enough to suit me. There is too much water in it. The cows do not give as rich milk as I would like them.

I feed heavy with corn, oats and bran, ground, twice a day; and for all that the milk is not as rich as it ought to be. The cows give lots of milk, and I like the silo, but wouldn't it be better for me to plant common yellow dent corn?

Have talked with some that have silos, and some say the common dent is the best and others say it won't keep good, and that the red cob ensilage is the best. I would like you to ask the question through your paper, and see what the opinion is of those that have silos, if it is not asking too much.

INGHAM Co., Mich.

W. A. BLACKMORE.

[We should prefer to plant the variety that has long been grown in your section for grain purposes. You can depend on such corn to mature.]

If you wish more fodder and less grain, plant or drill in thicker. We do not like the large southern varieties, even for the silo. A goodly portion of ears makes the silage better, but silosists now let the corn mature more before cutting. We should prefer corn too ripe to put in the silo, rather than put it in too green. If inclined to be too dry, wet down thoroughly as it goes into the silo.—Ed.]

For the Michigan Farmer.

IN NORTHERN MICHIGAN.

It is not very often that I see anything in your valuable paper from this part of the State, and if you have no objection I will furnish you a few items occasionally.

Cheboygan county possesses a great many advantages for the new settler; excellent soil, healthy climate, good markets and shipping facilities, cheap lands and steady employment during the winter in the woods.

All kinds of cereals, Indian corn, roots and the finest of fruits (peaches excepted) can be raised successfully. One of the latest enterprises is a flax mill, started by a stock company at Cheboygan. Our farmers are taking a great deal of interest in this new industry, and several hundred acres will be seeded to flax this spring. Please give us your opinion about raising flax in Michigan.

CHEBOYGAN Co., Mich.

H. L. KOEHLER.

[Shall be glad to hear from you at any time. The FARMER wishes to largely increase its circulation in Northern Michigan, and wants to know what the farmers "up there" are doing.]

See another article on flax culture. Shall be glad to hear from others who have had experience.—Ed.]

For the Michigan Farmer.

GEARED WINDMILL A SUCCESS.

In looking over my FARMER of April 17th, I read a letter written you by Mr. A. Williams, in regard to his geared windmill, and also your remark concerning the windmill, in a general way.

In order that your readers may have both sides of the question, I take the liberty of giving you the following information in regard to the 12-foot steel geared windmill which I had erected for me last December.

This mill was erected on my barn, using a steel tower which was thoroughly braced with iron rods, making the entire outfit perfectly rigid. Since I put up this mill I have cut all my feed, and I have done all

the grinding for 35 head of cattle and eight horses.

We use about seven or eight bushels of ground feed each day, and besides doing my cutting and grinding, I have shelled seven or eight hundred bushels of corn and have sawed enough wood to last me the coming year. This has all been done without the breakage of a single casting, and not one cent's worth of repairs of any kind, and the only cost has been for one gallon of oil.

In view of my experience as stated above, I cannot help but think that there must be something wrong, either with the mill Mr. Williams has used, or the way in which it was put up, as my mill has been perfectly satisfactory in every way from the day it was first started.

ANTHONY TERNES.

WAYNE Co., Mich.

For the Michigan Farmer.

GROWING FLAX.

I see in the last issue of the FARMER that Mr. Spaulding, of Ionia Co., wants information in regard to flax culture.

I have never been a friend of flax. Have spent several years in Nebraska and North Dakota, where flax is one of the principle crops, and helped handle the crop in all its stages, from seeding to threshing.

The main reason why flax should not be sown is that it is every hard on the land and will make land poor and unproductive the quickest of any crop I know of. Another reason is that it is a very difficult crop to harvest and thresh.

I never saw but one self-binder that would do anything like good work in cutting the crop, and that worked very slowly. And when it comes to threshing there is sure to be trouble, as there are very few machines that can handle flax straw successfully.

Bins or bags that will hold any other grain will not do for flax seed, as it is about as hard to hold as quicksilver. Nothing but absolutely tight bins will do. I do not want to discourage anyone from experimenting with flax, but simply mention some of the difficulties to be met.

The plan generally followed in North Dakota is to prepare the ground in the spring, either by plowing or with a disc pulverizer (plowing preferred), then seedling about the first of June at the rate of one-half bushel per acre, sown broadcast with a broadcast seeder, which sows and covers at one operation.

The cutting is done with a self-binder with the twine left out, dropping the flax in a loose bundle. It is generally left in that shape until drawn to the threshing machine.

In conclusion, let me say to those intending to raise flax, go slow. Sow but little at first, and learn how, and watch the effect on your land.

SHIAWASSEE Co., Mich.

FRED J. ROWLEY.

For the Michigan Farmer.

NO SLAT AND WIRE WANTED.

I saw in a recent issue an article on Fencing by Mr. E. F. Brown. Now as I am a young man, and never have built much fence, I don't agree with Mr. Brown.

When a man says that a slat and wire fence is one of the best fences I don't think he is right, and don't think it good advice for other people to follow who wish to fence and save time, expense, and bother every two or three years in repairing.

Any man that has a slat and wire fence knows that it will not stand the wind. You may do your best when you build it, but in a short time it is slack and post loose, and how are you going to make it tight again?

When you strain common wire you break the fiber in it and your wire will never come back again and how are you to do in this case? Barb wire is not a nice thing on a farm. If I had my say about barb wire, it would be made a crime to use it.

My advice is, if you want a fence and one that will stand as long as a man will, and the easiest fence on posts, and that can be moved without much expense, I think the coiled spring wire is the best that I have ever seen.

MONROE Co., Mich.

C. F. THAYER.

[Our impression is that friend Brown referred to plain wire fence, eight or ten strands, with four or five slats or pickets to the rod. This makes a good fence, and one that is very generally constructed by farmers at the present time.]

But deliver us from the closely woven wire and slat fence, with two or three main wires, either single or double, and slats from three to four inches apart. We have faithfully tried several short stretches of such fence during the last six years, and want no more of it at any price.—Ed.]

THE Illinois State bulletin says that winter wheat is nearest a total failure ever recorded, with one exception. It says yield will but little exceed enough wheat for seed. The substance of the official statement is as follows: "Reports from nearly half of the counties in the State, including most all of the winter wheat growing counties, are to the effect that two-thirds of the wheat seeded last fall, 1,749,000 acres was winter-killed or destroyed by floods, and the condition of the remaining third, 583,000 acres, is so poor that under the most favorable conditions from now until harvest only about one-third of an average crop may be expected."

FOR HOARSENESS, COUGHS, ASTHMA AND BRONCHIAL TROUBLES, use "Brown's Bronchial Troches." Sold only in boxes. Avoid imitations.

Live Stock.

TUBERCULOSIS AND ITS SUPPRESSION.

After some years of very vigorous and costly work in an attempt to stamp out tuberculosis in her herds of cattle, and without the great results which were confidently expected to follow, the State of Massachusetts, or rather her cattle commissioners, are pursuing a different course, having in view the suppression of the cause of the disease rather than the killing of those affected. We think this change in method, if vigorously followed, will be speedily followed by an improvement in the general health of the cattle of that State, and the gradual but effectual stamping out of this disease. In a letter to the *New England Farmer*, L. W. Curtis, M. D., says of the new work taken up by the commission:

"The cattle commissioners are now pursuing a sensible course in looking after poor ventilation, which is the prime cause of tuberculosis. They are having the local inspectors record the condition of barns where inspected herds are kept. If any barns are reported as ill-ventilated, let the commissioners state to the owners what they must do if they wish to keep their cows healthy. If they do not comply with the conditions, that fact should debar them from receiving any compensation from the State; no one should receive any pay after the first testing. This would make farmers more careful about ventilation. Within the last year I have visited several barns where the stock had been tested the second time, usually taking about the same as on the first test.

"In one case the cows were kept in a model barn (?) in which the plan for ventilation is good, only the cows cannot get half enough fresh air to meet their wants. There is a cold air box one foot square for 30 cows. This box might do on a clear day when we get a heavy northwest air; but when we get the light, moist, easterly air, there can be but little change of air in the stable, and this too, at a time when the cows need it the most; cows need nearly two-fifths more air when the wind is in the east to obtain the same amount of oxygen. I would rather sleep in a cold room with pure air than in a warm room with impure air. I always sleep with the window open, the year round and never had the grippe, nor can I remember when I have had a cold; staying in ill-ventilated rooms causes these diseases and many others. We never hear of horses having tuberculosis; but put them under the same conditions we do the cow and they would have it just the same. The fact that they never have it shows that fresh air is the great factor in preventing, yes, and in curing tuberculosis, before the animal has become badly diseased.

"There is no objection to making barns warm; but they should be well ventilated even if the temperature must go below freezing point."

We publish the above extract for the consideration not only of dairymen, cattle breeders and farmers, but also for the State Live Stock Commission and those who have the supervision of cattle and other live stock belonging to the various State institutions. Heretofore all attempts to prevent the spread of tuberculosis have been along the line of slaughtering or quarantining affected animals; but it has not proved effective. To accomplish the best results the causes which produce the disease must be removed. The disease is not the result of breeding, although that may spread it, as, although European scientists hold that it is not hereditary, we are strongly of the opinion that it is, but in most cases it is the result of close housing in unsanitary buildings, and seclusion from fresh air and sunlight. The herd of cattle at the Agricultural College has suffered severely from the disease, and we think its history proves the hereditary character of the disease, as well as the fact that it will break out spontaneously among healthy cattle when they are kept under proper conditions to produce the disease. Those old stables, situated in a hollow, and constructed so as to render proper ventilation impossible, should be torn down and others built which would be in accord with modern sanitary requirements. Of course this would cost some money, but much less than the state is now losing from these old buildings, and which losses must continue indefinitely so long as they are in use. Fresh air, sunshine and pure water are all cheap and accessible, and they are the best aids to sound health and usefulness. Why not use them to the fullest possible extent at all seasons of the year, even if a few quarts of milk are lost in the process?

THE *Farmers' Voice* does us the compliment of publishing the diagram showing how Australian fleeces are skirted, with a part of our descriptive article. But our contemporary credited the Zenner-Raymond Disinfecting Co. with getting up both the diagram and article. They were both prepared especially for the *MICHIGAN FARMER*, and the Company referred to credited them to the *FARMER* in its circular from which the *Voice* copied them. But we are glad to see them copied whether we got credit or not, for it will educate farmers to the inherent dishonesty of the wool tariff in its present shape.

THE BERKSHIRE AS A BACON HOG.

Henry Stewart, quite an authority on the hog, recently stated in an article in the *Country Gentleman*, that the Berkshire was the best bacon hog known 20 years ago. A party writing from Prince Edwards Island, Canada, in commenting on Mr. Stewart's statement, says:

If the Berkshire was the best bacon hog then, it certainly is not now. Any person who knows anything of the "English bacon hog" knows that the Yorkshire has earned that appellation, and that the Yorkshire is the hog imported to Denmark to improve the native breeds, and has left his impress on that country, as witness the value placed in the English market on Danish bacon. Any person who knows anything of the "bacon hog," must admit that the hog, *par excellence*, for bacon, must have length of side, rather narrow back, rather lean; these are directly opposite traits to those of the Berkshire, which is short, broad-backed, fat and elephantine. The Yorkshire cross on the short sows of the county make first-rate bacon hogs, the Yorkshire Duroc-Jersey cross being, probably, the best cross, and rather more profitable than the pure, true Yorkshire from the feeder's standpoint.

They must have a peculiar breed of Berkshires where this writer lives. There is no doubt the Berkshire, as usually bred, is rather thick in the back for a prime bacon hog. But we never knew before that it was deficient in length of body. In fact it has always been classed as a long-bodied animal. The Yorkshire may be longer from "end to end," but a good deal of that length will be taken up with his head, and that will never make bacon. He is thinner bodied than the Berkshire, and to that extent excels him as a bacon hog. But will not the superior excellence of the Berkshire in hams and shoulders more than even up this advantage of the Yorkshire? The Berkshire will make a good bacon hog if grown properly. He must have plenty of range, and an opportunity to graze, that his bodily activity may produce muscle, and his diet not be too fattening. The bacon hog must be strong boned and active, while the pork hog, which has until recent years been regarded as the best type for the farmers to grow, was largely the product of the cornfield and a limited range. Many Berkshires have been spoiled by breeding for that type—a broad back, compact, fine-boned animal, which fattens quickly, and whose flesh is mostly lard. The bacon hog is not altogether the product of a special breed. He is quite largely the result of feed and management.

The standard of excellence adopted by the American Berkshire Association is as follows:

Color—Black, but skin and hair occasionally showing tinge of bronze or copper color, with white on feet, face, tip of tail, and occasional splash on arm. 4
Face and Snout—The latter short, broad and meaty, the former fine, well dished and broad between the eyes. 9
Eye—Very clear, rather large, dark hazel or gray. 2
Ear—Sometimes almost erect, but generally inclined forward, medium size. 4
Jowl—Full and heavy, running back well on neck. 4
Neck—Short and broad on top. 4
Hair—Fine and soft, inclined to thickness in male. 3
Skin—Smooth and pliable. 3
Shoulder—Smooth and even on top and in line with side, thick through chest. 7
Back—Broad, long and straight, or slightly arched, ribs well sprung. 10
Side—Deep and well let down, straight side and bottom line. 6
Flank—Well back and low down on leg, making nearly a straight line with lower part of side. 5
Loin—Full and wide. 8
Ham—Deep and thick, extending well up on back and holding thickness well down to hock. 10
Tail—Well up on line with back, not too fine, short or tapering. 2
Legs and Feet—Short, straight and strong, set wide apart, with hoofs nearly erect and capable of holding good weight. 8
Size and Symmetry—Size all that is possible without loss of quality or symmetry, with good length. 7
Style—Attractive, spirited, indicative of thorough breeding and constitutional vigor. 3

AN APPRECIATIVE LETTER FROM A SHEEP-BREEDER.

To the Editor of the Michigan Farmer.

THE *FARMER* comes to us every week full of good things and is highly appreciated by every member of the family.

One of the features of the paper that interests me just now is the descriptive articles of animals, showing cut of same. Farmers like to see the picture of a fine blooded animal, as it gives them a better idea of the breed.

I enclose a sample of wool from a two-year-old Improved Black Top Merino ram—one year's growth. It is a fair every-day sample. I could send a dozen as long and fine. My ewes averaged 11½ lbs. per head of better wool than Australia can produce.

I thank you for your most excellent articles on the wool schedule. It is too bad that we must submit to so much tinkering with our interests. O. M. ROBERTSON.
Eaton Co., Mich.

The sample sent us by Mr. Robertson is a beautiful specimen of Delaine wool. The staple is full 4½ inches in length, with beautiful crimp, white oil, and very elastic. Every fibre is perfect to the tip, showing that the flock has been well cared for. It is just such high quality wool as this sample which will be most severely discriminated against by the proposed wool

schedule, because it is very similar in quality to the best skirted fleeces of Australia. Growers of this class of wool are to be put under a ban by Congress at the instance of eastern manufacturers. They are to be forced out of growing the finer grades of wool through a miserable subterfuge, and because so many of those who are supposed to represent agricultural states are better versed in law or business methods than the interests of their farmer constituents.

THE HORN FLY.

With the advent of warm weather cattle owners may look for a recurrence of the attacks of the Horn Fly, which is a most exasperating pest to cattle. Various remedies have been recommended to protect cattle from the attacks of this fly, such as smearing the parts of the animal where the flies generally settle with some greasy substance, such as axle-grease, or other ill-smelling compound, and this has been found helpful. The Entomological division of the Minnesota University, says tobacco powder, dusted among the hairs, is a fairly good remedy; it will not entirely prevent the fly from settling upon the animal, but will repel them before they have had time to bite. The true remedy, however, is to prevent these flies from breeding, and this is not such a very difficult matter as it might seem. The larvae of this fly can exist only in soft, almost liquid manure. All that is necessary to do is to accelerate the drying of this, a matter not at all difficult in our usually dry summers. This may be done by spreading all fresh droppings every day, when the moisture will be absorbed and the food will become too dry for the maggots. Neither would a general distribution of such manure destroy the value of the same. The liberal application of plaster to the manure removed from the stable, in which eggs were deposited, as well as in the manure-heap, deprives the maggots of food and at the same improves the value of the fertilizer. Cleanliness is as essential in stables as elsewhere, and clean stables do not possess the attraction for such insects that the neglected ones do. To make the remedy of depriving the maggots of appropriate food as effective as possible, united and persistent action throughout the invaded region is absolutely necessary, and it should be put in operation very early in summer, for if postponed until late it will not be of much benefit.

STOCK NOTES.

A VALUABLE book, "The Diseases of Sheep—their Prevention and Cure," will be given free to all purchasers of Cooper Sheep Dip before July 1.—See advertisement.

As showing the scarcity of young cattle at the west, farmers have been purchasing calves in the Chicago market to take back into the country and feed. Last week as high as \$5.25@6 per cwt. was paid for calves averaging 112 to 130 lbs., for this purpose.

H. C. WARD, of Pontiac, has marketed at Buffalo the past winter and spring, about 20,000 head of sheep and lambs. Last week he sold about 900 head of fed Mexican lambs, for which he received \$5.10 per cwt. Of course they were clipped.

DISCUSSING the value of the Dorset Horned sheep on the range, a Nebraska sheepman says: "The main objection to Dorsets on the range is in their herding qualities. They will not keep up with Merinos but bunch by themselves, and do not stand the roughing it like the range-bred Merino. As a lamb for feeding purposes, however, I think the Dorset-Merino has no superior.

A PROMINENT cattle feeder while in our office last week and discussing the question of good blood in cattle, said there was no question but what blood would tell. His firm purchased 1,000 good steers and put them in his feed pens, and among the lot were several carloads of good graded Shorthorns. It cost them about \$2 per head less to fatten the Shorthorns and they weighed 100 pounds more than the other steers and sold for 40c per hundred pounds more than the commoner cattle, and made quite a nice profit to the owners. Besides feeding cattle this same gentleman is starting in to raise blooded cattle, and he has lately picked up some good ones.—*Texas Live Stock Journal*. The figures in that item should set farmers thinking. It is no use trying to make money in this State feeding scrub steers, and the difference between them and good grades of the beef breeds is what makes one a good investment and the other a losing one.

A RECENT report from New Mexico will serve to show why cattle values have not been higher and the market stronger this spring in view of the lighter supplies available in the Union: "At no time in Deming's (N. M.) history has there been such activity in the Mexican border cattle trade as now. Since January 1, 825 cars have been loaded and shipped from the Deming yards containing a total of 33,000 head. In March about 10,000 were shipped, about 8,000 of that number coming from old Mexico; since April 1, 14,000, of which 4,500 were Mexican cattle, making a total of 672 cars in a month and a half. Thousands of cattle south of the border line are on their way to United States markets to come in direct competition with American cattle. Four years ago yearlings were almost unsalable at \$5 per head. To-day yearlings are at a brisk sale at from \$13.50 to \$15. Since March 1, from Deming station alone, out of 23,000 cattle shipped to the feeding places in the north and west, 12,500 have come from old Mexico."

THE tax on hides is a sop to the beef trust. The trust managers will not pay the farmer any more for his steers, nor charge the consumer any less for his beef; but they will be enabled to increase their profits in a left-handed way on the by-product, which they will sell to the tanners. The tax on hides is a renewal of a war tax thirty-two years after the close of the war.—*Philadelphia Record*. It never seems to strike writers who reason in this way that there is always competition from buyers when there is money in an article, trust or no trust. The tanner can go direct to the small butchers and farmers for their hides and pelts, and no power on earth can prevent an increase in value of an article which is in light supply and active demand. The duty on hides will add to the value of every beef animal, and we think it is just as desirable to have a duty on hides for the farmer as on leather for the benefit of the tanner.

BOTH houses of the Iowa legislature have passed a law asked for by the secretary of agriculture, authorizing the governor to accept the rules of the Department of Agriculture to stamp out hog cholera. It is proposed to select one or more counties where the disease is worst, inspect all hogs, kill those affected, and keep diseased hogs out. The federal government pays all expenses. The law takes effect immediately. It will be executed by the Agricultural Department bureau of animal industry experts. If successful, it will be applied generally. But this stamping out process will have to be repeated indefinitely if means are not taken to prevent outbreaks of the disease. Infection is not responsible for the spread of the disease. There must be a starting point, as in the case of small-pox, or there would be no infection. We believe the disease is primarily the result of careless feeding and unsanitary surroundings. These must be changed or the stamping out process will have to be repeated every few years.

THAT TIRED FEELING

Which afflicts you is a positive proof of thin, weak, impure blood, for if the blood is rich, pure, vitalized and vigorous it imparts life and energy. The necessity of taking Hood's Sarsaparilla for that tired feeling is, therefore, apparent to every one, and the good it will do you is equally beyond question. Take it now.

Dull That Tired Feeling and general debility and had no appetite and my blood did not seem

to circulate, I took different kinds of medicine without much benefit and finally began taking Hood's Sarsaparilla and it gave me a good appetite and That Tired Feeling is gone. I heartily recommend Hood's Sarsaparilla. I find it is a cure for weakness and unsound nerves." JOHN C. SEAMANS, Cortland, N. Y.

Hood's Sarsaparilla
Is the best—in fact the one True Blood Purifier. Insist upon Hood's; take no substitute.

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60 HEAD OF SHORTHORNS

The Springbrook Herd.
On THURSDAY, June 3, 1897,
The Result of 20 Years' Breeding.

For the first time since the Springbrook herd was started, buyers will have an opportunity to bid on the tops, as not an animal will be reserved. The herd never looked better, or was in better shape than at present. With the market for beef as good as at present, the Shorthorn, with its combined characteristics for beef and milk, is the breed for Michigan.

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BIG beautiful BARRED P. ROCKS, exclusively. High scoring, thoroughbred stock. Pitting and Conger strains. Cockerels, \$2 to \$2.50; Eggs, \$1 per 15. E. M. KIES, Reading, Mich.

The Horse.

THE MOST POPULAR DRAFT HORSE.

J. S. Cooper, a man who handles a great many horses of all classes at the Chicago stock yards, in a paper read before an Illinois farmers' institute on "Horse markets and horse breeding," spoke as follows of the best selling draft horses:

"In years past, in fact for a quarter of a century, I have unwaveringly advocated the Percheron as the best and truest type as well as the best selling draft horse. On general principles I see no reason to change this opinion, but the duty of a commission man is not unlike that of a newspaper—to gauge public opinion, ascertain its wants and conform to the general requirements so long as it is for the greatest good of the greatest number.

"The foreign demand in our market, now amounting to 25,000 annually and growing yearly, is so important that its interests demand and deserve careful consideration, and we find this year, for the first time, that all of the English and Scotch buyers are not only partial to Clydes and Shires, but give all preference to those breeds, and, all other things being equal, will give \$10 more for them than any other, and will in many cases pass by and altogether reject a much better Norman.

"While this is true of the Scotch and Englishman, the German, who is a large buyer of 1,450 to 1,600 pound blocks, always gives preference to the Percheron. The situation is, therefore, a little complicated, and if the American did not throw the weight of his influence to the Percheron, which they do to a man, honors would be nearly even as between the Englishman on the one hand and the German on the other. Domestic buyers, as a rule, dislike the hairy-legged Clyde, and, except in the case of an extraordinary good one, will not buy them under any circumstances."

We must take exceptions to the statements of Mr. Cooper that Americans, to a man, throw the weight of their influence to the Percheron. If he will come to this city he will find nearly every draft horse owned by the big truck companies to be grade Clydes and grade Shires. A few Percherons will be found where only light trucking is done, such as among stove manufacturers, express wagons, lumber dealers, etc. It may be thought that this comes from a lack of Percheron blood; but close to Detroit we have had several stock farms expressly devoted to the breeding of Percherons, such as that of Savage & Farnum and Senator Palmer. They certainly had good specimens of the breed. Besides that there were individual stallions owned in various parts of Wayne and Oakland counties; but the breed did not find favor with the firms carrying on the cartage of business in connection with the railways and manufacturers of heavy machinery. Why this is so we do not know, we can only state it as a fact. We have also been informed that this is generally true in all cities east of Detroit. On the contrary, Ex-Gov. Rich, who is connected with the Delta Lumber Co., and purchased the horses used by the company for years, says he has found the grade Percheron superior to all other horses for the lumber woods and for trucking in the city. Why there should exist such a strong prejudice among some against the Percheron, while the feeling in his favor is equally as strong among others, is a problem we have often attempted to solve, but never with success. It is so, and that is all we can say.

CAN TWIN COLTS BE RAISED?

To the Editor of the Michigan Farmer.

I would like to ask through the FARMER if any of its readers ever raised twin colts. I have a pair two days old that seem likely to live as far as I can see; but everyone I talk with says they will die; that there never was a pair known to live. Is it so?

ABLAND, Mich., May 11, '97. H. W. D.

We have never seen twins beyond the age of colthood, but are not prepared to say they cannot be raised. While authorities all mention the fact that twins are uncommon in the mare, not one of them consulted mentions that they cannot be raised. If such were the case it strikes us that fact would be stated. We would like to hear from any of our readers who have any knowledge on this point. Perhaps there may be a better chance of raising the colts if they were separated, as it may be that the mare will not be able to supply sufficient milk for both.

THE KENTUCKY DERBY.

The twenty-third Kentucky Derby was run on Wednesday of last week, and as usual the unexpected happened. Fifteen thousand people assembled at the Louisville course to witness it. The starters were Ornament, Typhoon II, Dr. Catlett, Dr. Shepard, Ben Brown, and Goshen. Ornament was the favorite, and Typhoon second choice. The distance was one and a quarter miles, and the time made by the winner was 2:12½. Last year Ben Brush won in 2:07½. At the start Typhoon took the lead, showed the way the entire distance, and won a good race without being at all distressed. The track was heavy from recent rains, and this made the time slow.

Typhoon II finished first, Ornament second, and Dr. Catlett third. The winner is by Top Gallant, dam Dolly Varden. The following is the official summary:

The Kentucky Derby, for three-year-olds; foals of 1894; guaranteed value, \$50,000, of which \$700 to second and \$300 to third; one mile and a quarter—Typhoon II, 117 (Garner), 11 to 5, won; Ornament, 117 (Clayton), 8 to 5 and 3 to 5, second; Dr. Catlett, 117 (R. Williams), 4½ to 1, third. Time, 2:12½. Dr. Shepard, Goshen, and Ben Brown also ran.

HORSE GOSSIP.

JOE PATCHEN, 2:03, sold for \$15,000 at Chicago recently, and in view of the present range of values, it was a good price.

THE horses of German cavalry regiments are to be entirely shod with paper shoes, recent experiments as to their durability and lightness having proved very satisfactory.

C. H. NELSON, of Waterville, Maine, owner of the great stallion Nelson, applied for reinstatement to the National Association's Board of Review last week, but it was refused. He was expelled for participation in the Nelson-Alcyon race some years ago.

A GOOD ointment for the stable is made of carbolic acid one part, lard eight parts. Or vaseline may be substituted for the lard. It is recommended for cracked heels, collar galls, barb wire cuts, etc. Vasoline is an active stimulant for the hair, and therefore especially useful in the case of cuts or abrasions of the skin likely to result in permanent blemishes.

LAST week at a sale of trotting horses at Terre Haute, Ind., Choral, 2:08¾, brought \$4,800; Bright Light, 2:08¾, \$3,100; Marengo, \$1,800; Old Hutch, 2:11¾, \$1,250; Praytell, 2:12, \$2,300. While these are not low prices, as compared with six years ago they show a frightful decline. Axtell, 2:12, at three years, brought \$105,000; Praytell, 2:12, by Axtell, \$2,300—rather a large difference.

AT Moscow, in Russia, for the summer meeting from May 1 to July 27, \$145,000 worth of purses are hung up. The trotters are divided into eight classes, the first for records of two miles in 4:51 (2:25½), and the eighth for records of 5:24 for the same distance (2:42). Besides these purses, a premium of \$1,450 is offered to any native horse beating the two-mile and one-mile Russian record.

A CORRESPONDENT in Bordeaux, France writes *The Rider and Driver* that the demand for American horses in France is very good, especially for high-class carriage horses and fast trotters. The manager of Tattersall, at Bordeaux, informed this correspondent that he had sold in that city upwards of 1,200 American horses since November, 1895. These horses were all consigned by George Crawford, of Newark, O.

LEWIS J. TEWKSBURY has entered both John R. Gentry, 2:00½, and Robert J., 2:01½, in the \$6,000 free-for-all pace to be decided at Charter Oak Park, Hartford, on the 4th of July. This cancels the Glens Falls engagement for that day. Of course only one will start, but as it is now certain that Star Pointer, 2:02½, and Frank Agan, 2:03½, will be in the fray, the race will be one of the big events of the season.

THE following from the Review shows how hobbled horses are regarded by those who buy horses for pleasure: A local rider had just bid on a pacer that was being shown, when a friend touched him on the shoulder and said, "Say, that horse wears hobblies." "No, does he? Well, if that's the case, I would not give a dollar for him if he could go in a minute and they had stopped making horses," he replied.

THE Chicago business men have issued a circular to the Legislature showing the advantages to Illinois' great horse industry that a conservative racing law would confer. Since 1893, the circular estimates that breeders and owners of the State have lost annually not less than \$3,000,000 through adverse legislation. That is really putting all the losses sustained by horse raisers on the stoppage of racing. But draft and street car horses have slumped as badly as race horses, and we never heard that this came from the fact that they were debarred by law from speed contests. Those figures need modification.

THE Massachusetts State Grange Fair Association has opened the following series of stakes to be contested at their meeting at Worcester, Aug. 31 to Sept. 3, entries to close May 1 and nominations to be named Aug. 14: Two-year-old trotters, \$400; 3-year-old trotters, 2:40 class, \$500; 2:45 trot, \$500; 2:30 trot, \$500; 2:22 trot, \$500; 2:18 trot, \$500; 3-year-old pace, 2:40 class, \$500; 3:00 pace, \$500; 2:35 pace, \$500; 2:25 pace, \$500; 2:19 pace, \$500; 2:15 pace, \$500. Besides this there will also be a free-for-all trot or pace for \$500, with \$100 additional to the horse reducing the pacing record of the track.

THE Bureau of American Republics has received reliable information that in the latter part of April a commission composed of 15 cavalry officers and six veterinary surgeons left England for the city of Buenos Ayres for the purpose of buying a large number of horses in the Argentine republic, to be used in the cavalry service of the English army. The circumstance is regarded as significant only in the fact of showing the development in that part of the world. It is the first time any European country has had recourse to the markets of South America for such a purpose. Heretofore the British army has been supplied with horses from

the United States and Canada, and to a limited extent from the continent of Europe.

THE N. Y. Herald says, in discussing the market for horses: With one or perhaps two exceptions the private dealers in fine horses are experiencing more difficulty in finding horses than they find in getting customers. It is by no means an uncommon occurrence for a dealer to get an order from a regular patron for a pair of horses, prices and date of delivery being left at an open detail, size and color only stated. Unless such an order can be filled from stock there is hardly a dealer in town to-day who would know just where to go for a high-class pair, suitable for, say, a brougham or an opera 'bus. That most of the dealers have horses to offer is due to the fact that they or their agents are covering more territory than usual in search of the right stamp of animal. The curtailment of breeding which began some four or five years ago has had its inevitable result, and to-day in districts where every farm had from six to ten well-bred youngsters coming on, a dealer may drive around all day and see nothing suitable. It is not that horses, using the word in a collective sense, are scarce, but it is that horses suitable for the keenly educated demand of the New York market are hard to find and are scarcer every trip a dealer makes in search of them.

ABOUT 60 head of American horses were recently disposed of at Glasgow, Scotland. The average price obtained for the lot was about \$125. A report of the sale in a Scotch journal says: "The horses were almost entirely good, substantial animals, suitable for van, lorry or cart purposes, and while not guaranteed in any manner, were believed to be quiet in harness and good workers. The attendance of buyers, although a large and influential one, representatives being forward from all parts of Scotland, was scarcely so numerous as at the preceding sale last week, when a number of the best known English dealers were present. The horses, while much the same quality and merit as those recently exposed, scarcely showed to the same advantage, having been very recently landed, but the bulk of them, notwithstanding that drawback, were exhibited in good working condition. Business during the day was fully as good as last week's, a steady competition being experienced throughout, while good commercial animals met if anything the sharpest trade. The animals were all of good ages, 5, 6 and 7 years, while their height ranged from 15.2 hands to 16.2 hands.

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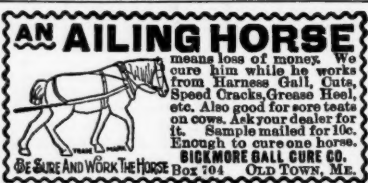
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Large English Berkshire Swine. Pigs of September farrow for sale cheap. Also sows bred for March and April farrow. **PAINTHORP & HACKNEY**, Mt. Morris, Mich.

THE PLUM HILL HERD of Berkshire swine, Shorthorn cattle, B. P. Rock and S. P. Hamburg fowls. Stock and eggs for sale. **C. M. BRAY**, St. Johns, Mich.

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WE can give you **BARGAINS** in **POLAND-CHINA PIGS** and **B. F. B.**, two grand yards. Eggs 15 for \$1. Write **WILLARD PERRY** or **Haastings M. H. BURTON**, Mich.

I SOLD CORWIN KING for \$200 at 7 years. He is now heads the oldest herd in Iowa. If you want **TOP POLAND-CHINAS** write **WM. H. COOK**, Watertown, Mich.

\$10 GIVEN AWAY. Same thing, when you can buy a pair of show pigs for price other breeders charge for one. **WM. W. BALCH**, breeder of Improved Chester Whites, Deford, Mich.

W. O. WILSON, Okemos, Mich., proprietor of the Michigan Central herd of **IMPROVED CHESTER WHITES**. I have a few head of '96 stock (both sexes) at reduced prices to make room for new comers.

CHOICELIGHT BRAHMS. Eggs, 75 cents for 12; 25 for \$1.25.

The Poultry Yard.

For the Michigan Farmer.

OBSERVATIONS.

At this season of the year those who sell eggs from fancy poultry have many letters of inquiry, and as a rule are glad to get them, though many times they do not materialize in orders for stock. There is, however, one class of letters that are vexatious to a degree, those that ask questions that are unnecessary; for instance: If I advertise Leghorns only or Cochins exclusively, it seems a waste of time (and postage stamps) to answer the man who wants Pearl Guineas or Plymouth Rocks. Read the advertisement carefully before writing the advertiser, and thereby save yourself unnecessary labor in many cases. When you write don't omit the county, for there are many places of the same name in the same state, and express agents make costly blunders for which they are not to be blamed, sometimes, because of this little neglect; and don't forget to write your name, postoffice, county and State distinctly. How many times the advertiser lays aside cards that are useless because the name cannot be read. Perhaps it is written with ink and blotted, or worse still with a pencil and erased. Never write a business letter with a lead pencil, and be sure to write name, postoffice, and State across the left hand side of envelope or card, ensuring its return to you if uncalled for. This simple precaution has many times given me help when I could not tell a customer's name. The second writing of the name gives the blotted or erased letter, and helps to ensure its speedy reply.

Once more (I have said it before) I believe the cause of many poor hatches would be removed if every person who buys eggs for hatching would remember to put the eggs, when received, in a room of moderate temperature for at least 12 hours before they put them under a hen. They need to settle after the shaking they get on the cars. The life germ will go back to its normal place after a few hours in a quiet place. Many seem to think there is no time to be lost, but that they must hurry the horse home from the express office, gallop out to the henhouse, and put the eggs under the first hen they come to, without stopping to apply insect powder or properly arrange the nest. Fix your nest with due care, not having the center too much depressed, and if the eggs are valuable it is wise to divide the hatch and put half of them under another hen; then if number one meets with a mishap, number two can save you from complete failure. Having once fixed the hen nicely, let her alone; don't be taking her off at all hours to see if anything has happened to the eggs, or something serious will be sure to happen. The hen will become restive and may desert her post. It is her nature to pass the time of incubation quietly.

HILLSDALE CO., MICH. PRISCILLA PLUM.

For the Michigan Farmer.

POULTRY COMMENTS.

Do you keep charcoal before your fowls so that they may have access to it whenever they wish it? It is one of the best things for poultry. As a blood purifier it ranks as A No. 1. It may be fed either in lumps so that the fowls may pick at it, or ground fine and mixed once or twice in their warm feed, that is, if you believe in the warm mash theory. No matter how it is fed, it will save a great amount of trouble with sick fowls.

Do you try to supply your fowls with vegetable diet during the winter months? Beets, turnips, apples, cabbages or almost anything in the vegetable line will be well disposed of if they are turned over to the chickens. Don't overdo the matter; a little wanting will be better than a little too much.

The editor of an eastern poultry paper after commenting on an elaborately arranged recipe, taken from the writings of a brother editor, suggests the following as a commendable substitute: "Take two pounds fish hooks, assorted sizes, four pounds sawdust, eight pounds glue, two pounds saltpetre, four pounds spikes, four pairs old shoes and three pounds India rubber. Boil all in sixteen gallons of strained honey and put a pint to each quart of drinking water." The above is as good as any on the market, so we are informed. If the gentleman had added, also, some of the various brands of "poultry food" he would have been right also.

Do not be afraid of breeding from fowls with crooked breast bones. The deformity is caused by the young birds taking to the roots before fully matured. The effect is accidental not hereditary. As a general thing it is not considered that it will breed into the progeny.

If anyone who by chance reads these notes contemplates purchasing eggs during the coming season, bear well in mind this fact: it is not eggs you are buying, but the chicks they will produce. If you are dealing with an honest man, you are trading him the price of a setting for what may have taken him years to acquire. Don't think you are going to buy something for

nothing. If you invest in dollar eggs make up your mind that your eggs will come from dollar stock.

If you have a sick fowl, unless for some reason it is of especial value, by far the better way is to treat it to a dose of hatchet. If you think it is going to pay to try and "doctor it up," then by all means shut it up by itself or there will be serious danger of conveying the trouble to the other members of the flock.

A fowl's comb can be taken as an indication of its health. A comb of natural size and bright red always denotes the best of health. A withered, shrunken, faded comb is always a sure sign that something is wrong. A fowl will not lay well until its comb assumes a natural color.

An egg may be badly soiled and yet be perfectly fresh; but it is sometimes difficult to convince the buyer. While on the other hand, an egg that is clean and in good shape, although it may be a trifle old, will go without question. Eggs are judged by their outward appearance.

Are your fowls troubled with sore feet, the disease taking the form of a bunch on the bottom of the foot? If such is the case, it is doubtless a disease commonly known as "bumble foot." It is caused by the perches being too high. The fowls in coming down strike too heavily, owing to the fact that they must come nearer a perpendicular than they otherwise would if the roosts were lower.

Good clover hay chopped fine and steeped a few minutes in boiling water makes a very good substitute for green feed. If used in moderate quantities a considerable good will result.

When neighbors who raise turkeys live close together so that there is danger of mixing droves, the difficulty may be remedied by a dash of different colors of paint on the wings, each owner having his own particular trade color.

If a person doesn't care to soil the plumage of the turkeys as the above would necessarily do, we would suggest the use of leg-bands; these can be purchased of any poultry supply house for a very small amount. Home made bands could be contrived very easily by using bits of wire. Different colors and sizes could be used to distinguish.

Also remember that it will take just exactly as much time, care and trouble to raise chicks from dollar eggs as from five-dollar eggs.

C. P. REYNOLDS.

POULTRY ABROAD.

From our Special English Correspondent.

It is worthy of notice that the French system of fattening poultry has extended to different parts of this country and beginnings made in what I think will yet be a helpful industry in many directions. During recent months renewed interest has been awakened with regard to table poultry. At some of our principal agricultural shows held last season, demonstrations were arranged for in dressing and trussing, and these were always followed with the very keenest interest.

The feature, however, of the past year in as far as table poultry is concerned, has been the remarkable display of French exhibits at the Smithfield Table Poultry Show, where, in response to the invitation of a committee, a number of the leading French breeders sent specimens of their fowls. Certainly it was a revelation to those who have not been familiar with these fowls in France. As an instance of the educational value of these exhibitions, I may mention that a gentleman said that many a time he had doubted the statements made as to the quality of the French table poultry, but he could do so no longer. The object of the committee was to show what is being done in France, and to make this an incentive to greater efforts on the part of our own producers. We have all that can be desired in the way of quality, if advantage is taken of the breeds already with us; but certainly we lack the method of fattening which is characteristic of French poultry. One of the French exhibitors said that if the English knew how to fatten their fowls properly they could beat the French altogether. This Smithfield Table Poultry Show, together with the remarkably good display at the dairy show in October, cannot fail to have a very wide influence in showing what are the best qualities of table poultry, and it ought ever to be the aim of producers to secure quality.

In this point at least of supplying the English market with a large and continued export of both eggs and poultry your States farmers have a wide opening. Surely when Australia is sending to the London market thousands of frozen rabbits weekly, which sell readily at 18 cents apiece, there is room for such produce as eggs and birds, which, if satisfactory, would be made to return at least a paying profit to the farmers. Fresh laid eggs sell readily on the farm to-day at 3 cents each.

YORKSHIRE.

AGRICOLA.

Experience proves the merit of Hood's Sarsaparilla. It cures all forms of blood diseases, tones the stomach, builds up the nerves.

PACKING EGGS.

Pack in anything that is clean and handy—boxes, jars, kegs, tubs, pails and barrels. Only fresh, clean, whole-shelled eggs are used. First the bottom of the package is covered with about three inches of salt, on this the eggs are placed, on end, just far enough apart not to touch each other or the sides of the package; then the layer is entirely covered with salt, and another layer of eggs is put in, and so on until the package is full. The packages are kept in the coolest place at command, and are not turned, for we have found out, by trying both ways, that when the eggs are placed on end, as they should be, the turning the packages over every few days is not only useless work but actually injurious.

Eggs thus packed and kept in a dry cellar where the temperature ranged from 50 to 60 degrees kept good between six and seven months. Mind you, I don't say they were equal to fresh laid eggs, but they were good. The whites were not so firm as in fresh eggs, but the yolks were whole, had not stuck to the shells and beat up light, though not so frothy as fresh eggs. Eggs that were coated with vaseline, wax and other things kept no better (some of them not so well) than those that were packed without any previous preparation.

If you want to pack eggs for home use or for market, you need not fear to pack all you can get in salt, provided you pack as I told you—use only fresh, clean, uncracked eggs, keep in a dry cellar where the temperature will not go much above 60 degrees, and do not shake the eggs up by turning the packages over "every second day." If your cellar is a little inclined to dampness at times, set your packages up from the cellar bottom. We use "coarse fine" salt, and the same salt is used year after year. Don't hold preserved eggs too long. It is, generally speaking, better to sell in November and December than to wait longer. After the first of January the prices of preserved eggs go down, as fresh eggs come into the market in greater number.—Fannie Field.

When writing to advertisers please mention that you saw their advertisement in the MICHIGAN FARMER.

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are due to a weakened condition of the nerve centers of the brain, and a consequent insufficient supply of nerve fluid to the nerves throughout the whole body, rendering the patient weak, irritable, tired, nervous and completely unstrung. The cause of these troubles are varied. Over-work, mentally or physically, worry, over-exertion, continued strain upon the nerves in any capacity, will sooner or later result in some form of nervous disorder. In such cases you will find that

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Rev. O. O. Wiard, of Buffalo, N. Y., says: "Hard work as pastor, editor and lecturer, placed me in a condition which plainly told I must obtain relief. I was nervous and completely exhausted. Dr. Miles' Nerve promptly and permanently restored me to health." All druggists guarantee first bottle benefits or money refunded. Book free. Address

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MANN BONE CUTTERS and up TRY THEM BEFORE YOU PAY FOR THEM. NOTHING ON EARTH WILL **MAKE HENS LAY** Like Green Cut Bone. Ill. catalog free if you send this paper. F. W. MANN CO., MILFORD, MASS.

EGGS

for hatching. B. P. Rocks from select pen. \$1 per 13; \$1.50 for 26 A. A. WOOD, Salfre, Mich.

13 LIGHT BRAHMA eggs for \$1.50 from a grand pen of 5 birds bought in Ohio in March, mated to breed prize winners. F. M. BRONSON, Vermontville, Mich.

BUFF LEGHORNS, S. C. B. Leghorns, Barred P. Rocks, Black Minorcas, Pekin Ducks. Eggs \$1 per 17. E. L. LARNED, Worden, Mich.

PEKIN DUCK EGGS for sale at \$1.50 per 11, from high scoring birds. E. A. CROMAN, Grass Lake, Mich.

BUFF LEGHORNS—Eggs from pen No. 1, \$1.50 for 15; eggs from pen No. 2, \$1 for 15. No stock to spare. A few Light Brahma Cockerels. Light Brahma eggs, \$1.50 for 15. L. A. A. SMITH, Lock Box 653, Saginaw, E. S., Mich.

26 S. C. B. LEGHORN EGGS FOR \$1.00 from a pen of 33 that laid 613 eggs in December. Pure stock. Free range. A good hatch. F. M. BRONSON, Vermontville, Mich.

ENGLISH PHEASANT EGGS FOR SALE, \$2.50 per 13. Order early and get June birds. Finest game bird on earth. Money must accompany orders. F. T. HYNES, Brighton, Mich.

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BARRED PLYMOUTH ROCKS. Brown egg strain. Scientifically mated, and bred for Egg Production. Every egg guaranteed to hatch or money refunded. Write for particulars. GEO. H. REISSMAN, Northville, Mich.



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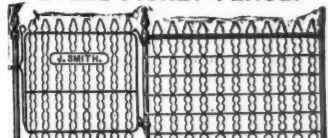
The Woman, The Man, And The Pill.

She was a good woman. He loved her. She was his wife. The pie was good; his wife made it; he ate it. But the pie disagreed with him, and he disagreed with his wife. Now he takes a pill after pie and is happy. So is his wife. The pill he takes is Ayer's.

Moral: Avoid dyspepsia by using

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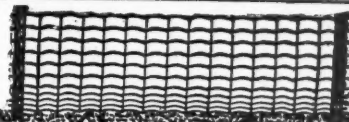
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Confidence Restored.

Not Page confidence, that was never lost. Sales increased every year through the late "unprosperousness." Now comes 35 per cent increase for the month of April. This shows that people like the Coiled Spring and like to buy it of the owner, rather than those who attempt to appropriate it without leave or license.

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CHURCH STEEL SPRING LOCK Wire Fence and Gates. Have No. 7 Double Steel Pickets. Galv. Steel Lock that locks line wire to picket. Cannot Slip. Write for Free Sample, Circs. and Terms to Agents. **The Church Manufacturing Co.,** Box 426, Adrian, Mich.

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Who can think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write **JOHN WEDDERBURN & CO.,** Patent Attorneys, Washington, D. C., for their \$1.00 price offer and new list of one thousand inventions wanted.

FOR SALE, Aspinwall Potato Planter. New last year. Price, \$40. **W. C. ROCKWOOD, Flint, Mich.**

Grange Department.

Our Motto:—"The farmer is of more consequence than the farm, and should be first improved."

Address all correspondence for this department to
KENYON L. BUTTERFIELD,
AGRICULTURAL COLLEGE, - - MICH.

News from Michigan Granges is especially solicited.

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THE EDITOR'S TABLE.

The farmers' institute bill passed the house last week at \$5,500. The opinion about the House is that the movement for the repeal of the mortgage tax law is dead. The bill repealing the farm statistics law remains about as it was, with apparently not much chance of going through. The bill relating to appeals from justices' courts is being opposed by the lawyers, and at this present writing seems likely to come up in the House in a few days. If the farmers hang together it will go through the House.

The action of the United States Senate in refusing to ratify the arbitration treaty is a disgrace to that body. It would be bad enough if the Senate had merely refused to endorse such a proposition as advanced by the executive department of the government; but when it is remembered that Congress itself, several years ago, advised the President to take measures looking toward an arbitration treaty, and that, acting upon this suggestion, the President and his secretary of state, after what seems to us to have been a most astute exhibition of diplomacy, recommended a treaty which met the views and received the endorsement of our most competent critics on such matters, the action of our "jingo" Senate in placing themselves on record, not only against the spirit of arbitration but against a measure practically instigated by themselves, is discouraging indeed. It is to the credit of the Michigan senators that they both voted for the treaty.

We devote considerable space in this issue to quotations regarding our rural schools. Those from the Outlook are very suggestive. It will be observed that the superintendent of public instruction in New York state is an earnest advocate of the township system, and this position is endorsed by the Outlook, from which we quote. Of course we understand the views of the Grange upon this subject, but it is always well to have both sides of a matter presented; hence we have quoted article from the other side.

We also have an article from the deputy superintendent of public instruction in this State, Brother D. E. McClure, on the subject of co-operation between the Grange and other patrons of the schools, and the teachers. This co-operation has resulted admirably in Oceana county, where the movement, we believe, was started by Brother McClure while commissioner. It seems to us to be one of the most hopeful movements along this line in the State, and we wish that every Pomona Grange would take

steps toward forming similar organizations. Talk over the matter among yourselves and with the county commissioner of schools and see if you cannot arouse a greater interest among the farmers regarding the details of management in the rural schools. We are sure that Brother McClure will be glad to answer any further questions on this movement, in these columns.

GRANGE NEWS.

BRADLEY GRANGE No. 660 is still alive and in quite a flourishing condition. They have not got a very large membership but each member takes an active part in Grange work. They hold regular meetings once in two weeks on Saturday evening. The lecturer prepares a program for every meeting. They have their new hall all finished, and would like to know a good plan of how to interest outsiders in Grange work.—ALICE FOX, COR. ALLEGAN CO.

MONITOR GRANGE No. 553 is still alive and in working order. Although our numbers are few we are not discouraged. At our last meeting the program was a discussion of the topic, "How best to economize on the farm?" A few of the thoughts brought out were: "Economize by buying what tools are needed for farm use instead of wasting time to borrow of your neighbors; keep thoroughbred stock instead of poor; hauling of manure in winter instead of waiting till spring's work begins; pruning and spraying of fruit trees." Many other valuable suggestions were given which if carried out by each one would be very beneficial.

The young people have planned a sham lawsuit for our next meeting.

At a meeting held May 4th resolutions of condolence were passed for Brother and Sister Muscott owing to the death of their little three-year-old daughter, Bertha. Also a page on our records was set aside to her memory.—MRS. JENNIE E. MUSCOTT. GRATIOT CO.

SHERWOOD GRANGE No. 96 met at the hall Saturday night, May 8th, a goodly number being present. This meeting was devoted to the literary contest that has been in progress for some time. There were several good papers read. One by Mrs. H. M. Travers on the temperance question, she holding that the ballot in the hands of women would be death to the liquor traffic. Paper by Mary Swain, "The educational value of newspapers." Our worthy lecturer read a paper on the "Restriction of the Press," thought laws ought to be passed prohibiting the circulation of illustrated newspapers of the character of the Police Gazette, also dime novels. The contest ends with a maple sugar supper provided by the losers. We have plenty of music in our Grange. Our organist never fails to be present and all that can sing are willing to help make the meetings enjoyable. At our next meeting we initiate four new members, all young people.—MRS. A. P. L. BRANCH CO.

FOR some time past Montcalm Grange No. 318 has been contemplating a visit to our sister Grange at Grattan, and on Thursday, May 6th, nearly fifty of our members drove 12 miles to see them and were bountifully entertained.

After dinner the master of Grattan Grange called upon some of the visiting members for remarks. Bro. Belknap said the meeting reminded him of another gathering in the east a long time ago where a great multitude was fed, and after all had been fed seven basketsful remained. He said that many of the brightest men of our country were brought up on a farm; that the boy who took up a profession did not live as free and independent a life as the boys on the farm, and the closer we live to the golden rule the better off we are.

Bro. Parkhurst, master of Montcalm Grange, said he hoped Grattan Grange would not give up their work wholly to their young and new members yet, but would let them gradually become acquainted with rules and regulations first, then elect them. Grattan Grange has risen since January 1st from 24 members to over 100, a great many of whom are young people, and some re-instated.

Bro. B. S. Bigley told what the Grange had been doing in the last 24 years. He said it had broken down political parties and was the founder of equality of the sexes. He spoke of the friendly greeting of Grattan Grange which he hoped to return in the near future.

Bro. Geo. Ackert, of Grattan, said he remembered hearing his mother read from the Holy Book of the happy greetings of old, and although he could not now hear, he could tell by our looks that all were enjoying themselves. He said that Grattan ladies were noted for being most excellent cooks, but the Greenville ladies were the best looking; also that the Greenville gentlemen had the best appetites.

Music and recitations enlivened the program. Grattan promised to return our visit soon.—MRS. C. H. THOMPSON. MONTCALM CO.

HILLSDALE POMONA held its May meeting with Adams Grange on the 6th. The busy season had a marked effect on attendance. In the absence of a regular program the time was taken up by discussing "Farming and its outlook."

Stock raising. Bro. Edwards: The outlook is good for all kinds of stock raising. Sheep are scarce and lambs are high. Pork in the old world is nearly exhausted and there will be a good export demand for the next six months at least. The cattle market is excited with a light supply. Good

horses are in good demand and bring a good price.

Bro. Moore: Feeding coarse grain at present prices and selling finished products is good business just now and will keep our farms up.

Dairying. Sister Bowditch: Without a careful account we don't know what profit there is in dairying. Last year a neighbor with thirty-five cows, some of them inferior, netted \$43 per head. This year he will have forty, with the inferiors left out. Jerseys have their place only in the dairy.

Bro. Moore: I tried three Jerseys one year without extra care, and they netted \$40 per head, skim milk not counted.

Sister Hunter: If we can keep out of debt these hard times with either Short-horns or Jerseys, we should be thankful. I have sold to the creamery for the last six years. I think it is the best way.

Bro. Rockwood: I have sold to the creamery. They allow their customers one pound of butter for every 113 cubic inches of cream. By their own test mine went one pound to 103 cubic inches, churned. At home it took only 85. We should use all the milk possible in our families; it is economical and healthful. Milk should not be allowed to sour. The swill barrel is a breeding place for bacteria.

Sister Hunter: I protest against the swill barrel; it's a species of barbarism.

Root crops. Bro. Travis: For a root crop I raise mangels. They are productive, cheap and profitable, and are liked by cattle and swine. They are good to keep stock in a healthy condition. Lice are destructive to turnips.

Bro. Rockwood: To get rid of lice, it's a good way to sow between the rows of early potatoes. It is also a protection to cabbage. But if worms should get in, use Paris green before heading.

Sister Hunter: Paris green is dangerous. For cabbage worms I take a teakettle of boiling water; enough to kill all worms and parasites will not hurt the cabbage.

There was no remedy known for the squash pests. The best seemed to be planting in the woods as near as possible or on new land.

Our next meeting will be at Lickleys' Corners with Lickleys' Grange on the first Thursday of June.—W. KIRBY.

TEACHERS' AND PATRONS' ASSOCIATIONS.

By D. E. McClure, Deputy Supt. Public Instruction.

It is our desire to bring to the attention of your readers the great good coming through teachers' and patrons' associations. It is not my desire to theorize upon the question, but to give your readers the benefit of experience.

I think that the organization of the teachers' and patrons' associations started in Oceana Co. with the formation of the teachers' and patrons' (Grangers') Association, of Oceana and Newaygo Counties. Its object is to cultivate a spirit of co-operation, of sympathy, of investigation, among farmers and teachers.

At these meetings, which last through several days and evenings, the interests of home, school, farm, state and nation are discussed. At the Hesperia meetings one thousand people attend annually. In Oceana County the teachers' and patrons' meetings open in the latter part of the autumn and continue until the close of the school year. The school patrons are a part of the organizations which are located in every part of the country. The patrons and teachers work together to make these meetings a success. In 1895 and 1896 twenty-one meetings were held in different portions of the county, with an average attendance of one hundred patrons.

Each local organization has its president, secretary and executive committee. Usually an evening lecture precedes the day meeting. At the day meeting picnic dinners are served at the place of meeting, thus securing the attendance of nearly every one in the neighborhood.

What have these meetings accomplished, and what may they accomplish?

1. They have cultivated a spirit of co-operation between patrons and teachers. This means better schools, more efficient application of the funds raised to pay for educational service.

2. They have placed a graded course of reading in nearly every district school of the county. This in itself is one of the most effective means to secure the development of youth in the way leading to good citizenship. When the desire and taste for good literature are established in the mind of youth, a good education is assured.

3. Better school rooms, better kept school yards, a better appreciation of the ethical side of life, are results of these teachers' and patrons' meetings.

4. The teachers' and patrons' meetings are developing a study of economics, of civics. They are bringing entertainment that is wholesome and uplifting to the somber side of agricultural life. You will hear less of "dude farmers," because of the teachers' and patrons' associations, in the coming years.

5. The teachers' and patrons' associations are the beginning of a system of entertainments which shall bless the agriculturist during his less busy months of work. It will break up the isolation of farm life and lead the farmer to cultivate himself and his children during the months he cannot cultivate his soil. This will mean that the farmer shall occupy a more influential place in directing the administrative functions of this government.

LANSING.

Pure blood makes strong nerves. Hood's Sarsaparilla makes pure blood. The moral is plain.

THE RURAL SCHOOL PROBLEM.

The following paragraphs are quoted from the current Outlook:

The forty-third annual report of the Superintendent of the New York State Department of Public Instruction, just issued, presents many encouraging features, and makes suggestions which should receive careful consideration from all citizens of the State. Ninety-four per cent of the children of the State of New York never go beyond the elementary schools—a fact which demonstrates the importance of improving the conditions and raising the standards of education in our elementary schools. In connection with this statement Superintendent Skinner lays great emphasis on the necessity of the maintenance of libraries in connection with our public schools; and says that from the beginning of a school career every child should have access to a library which should supplement his school work. As only six out of every one hundred children have the advantage of what we call higher education, the important question arises, What is the duty of the State to the ninety-four per cent? The Superintendent advises an improvement in the method of teaching spelling and composition; he protests against the promotion out of grammar grades of any pupil who cannot intelligently and accurately express his thoughts in writing. As ninety-four per cent of the children educated by the State must acquire their knowledge of arithmetic between the ages of eight and fourteen, the Superintendent believes that at fourteen years of age the child should have included in his studies commercial and business arithmetic, and he considers these as essential as a thorough drill in English. That courses of study are overcrowded and often beyond the ability of the pupil to master, the Superintendent acknowledges; but he believes also that time is wasted between ten and fourteen years of age by children of active minds.

The schools in the rural districts occupy a large space in the report, and the Superintendent strongly advocates the township system. The first difficulty encountered in the rural schools is the lack of systematic and businesslike management. These schools cannot be brought to a proper standard until their administration is conducted on same other than the present district school system. In 1860 the waste of public monies in the support of the rural schools was pointed out by Superintendent Van Dyck. The Superintendent of Education in 1877 followed the example of his predecessor, and urged the substitution of the town system for the present school district system. Superintendent Draper in 1892, unhesitatingly declared that it was his belief that if the township system of schools were once in operation it would greatly promote the efficiency of those schools. Superintendent Crooker in 1893 said, "The leading educators of the State irrespective of their political views, stand as a unit for the township system." Horace Mann in 1839, declared that the law of 1879, which authorized the towns in Massachusetts to divide themselves into school districts, was the most unfortunate law on the subject of common schools ever enacted in the State. In 1870 there were fifteen hundred district schools in New York State, with an average daily attendance of less than ten pupils each. In 1896 there were thirty-five hundred such districts. One of the officials of the Department of State Education in his report stated that he had visited a school where the teacher sat embroidering because there were no pupils, and an investigation showed that there were no children of school age in that school district. The remedy for this condition has been found, in Massachusetts and several of the other States, in the establishment of good schools in the center of each district, and the payment by the State of transportation of the pupils to and from the schools.

Recently in Connecticut a very careful map was prepared to show the advantage of this system. It is urged by progressive educators that the State be divided into State school districts equal to about the area of a county, each school district to have two high schools, located at points easily accessible by rail and otherwise, the elementary and grammar grades to be located by the State officers after a careful study of each locality. This would remove from the community the little red school-house with all its present limitations, sanitary as well as educational. The administration of the schools is to be under the control of a State superintendent and eight county superintendents, who are to serve for eight years, this superintendent and his assistants to be recognized experts and paid salaries commensurate with the services rendered. Eight county councils are provided for, composed of the County Superintendent, with one member for each town in the county, and an additional member for each five hundred pupils in school enrollment. Minnesota has within the last month arranged for the consolidation of her small school districts, and provision has been made for the erection of high-school buildings in the center of each township, and for the conveyance of the children at public expense. Superintendent Skinner, in summing up the difficulties of the elementary schools, makes a statement which applies to every State in the Union: "When it is remembered that the first eight years of school life carry the child through a formative period of greater consequence than any which follows, and that the State,

through the public schools, then exercises over all the children a control which it is immediately thereafter forced by withdrawal to relinquish in the case of ninety-four per cent of them, and the duty of providing the most favorable condition for intellectual and moral growth at this early stage is apparent."

RURAL SCHOOLS IN MAINE.

Maine has recently enacted a law providing for the grouping of towns for the employment of school superintendents. State Superintendent Stetson considers this the most important educational law placed on the statute books of Maine in the last half century. At present the rural schools in Maine have no expert superintendents, and the object of the present law is to give these smaller towns the benefit of having schools supervised by persons thoroughly equipped for the position, and as an expert who would give all his time to the work is to be paid by the State, the burden upon the towns will not be severe. Furthermore, the law is not compulsory, and cannot create opposition by seeming to be at all arbitrary; it permits towns to vote to unite for the purpose stated. Leading educators of the State are rejoicing at the long step in advance which this law seems to make possible.

THE INTERESTS OF THE GRANGE.

BY THE LECTURER OF THE NATIONAL GRANGE.

While indications point to 1897 as one of the best Grange years for increasing the number of Granges and the numerical strength of the Order, it should also be the best year in the history of the Grange in the good work which it is doing to advance the interests of the farming population of our country. While these interests are varied and cover a very wide field in their scope, they may be grouped under four general heads or divisions: the social, the intellectual, the financial and the political. By the latter I do not wish to be understood as meaning the party affiliations of the members of the Grange, which are as different as the creeds of the numerous political parties in this country, but by this I do mean the general relation of the farmers of the nation to the body politic, and their influence in the enactment and execution of the laws of state and nation. The fundamental principle of all good government is the protection of the rights and interests of the great body of people for whom the government was formed and exists, and no law is of value to any people or community which has not a valid reason for its enactment; neither is a law of value to the people which is not supported by public sentiment. The political work of the Grange, as I understand it, is to use its influence in enacting and supporting all good laws that are for the "greatest good of the greatest number," and to oppose all bad laws that are formed to benefit the few at the expense of the many. The Grange was never so free from partisanship and so well equipped for uniting its forces for good work in this direction as at the present time.

The Grange is also in excellent condition to receive benefits in a financial way. The principles of co-operation are better understood by farmers than ever before. The mistakes and successes of co-operative enterprises in former years are object lessons that have taught farmers how they may co-operate in trade relations with safety and advantage to their interests. The stringency of the times and the necessity of practicing economy in all other lines of business, makes it incumbent on the farmer to practice economy in the purchase of his supplies as well, and why should he not avail himself of the advantages of co-operation when the Grange offers him the opportunity of so doing? Members do not take advantage of the co-operative features of the Order as much as they ought. Not only can they save large sums of money in combining orders and buying at wholesale rates, but they can and should apply the principles of co-operation in the exchange of commodities between themselves. Bro. R. L. Holman, of Ohio, is manifesting a commendable zeal in his efforts to induce the members of the Grange in his State, and in other states as well, to take advantage of the co-operative features of the Order. The plan of exchange which he proposes is a feasible one and can be carried into effect to the great advantage of all parties to the transaction, if the members will take hold of the matter in earnest. There is no good reason why farmers in the same State, or in different states, should not exchange commodities or sell direct to each other and save all the profits of the middlemen. Will we do it, or will we continue to support the needless middlemen and keep on complaining about oppression and "hard times?"

But however great may be the opportunities for the advancement of the interests of the Grange in the departments above noted, they do not exceed the opportunities that are presented to do better work than has ever been done before in the social and educational departments of the Order. In fact here is where the strength of the Grange lies, and its greatest value consists in the educational advantages which it gives to its members. As the years go by and the needs of social culture and a broader and better education among farmers becomes more apparent, this arm of the Order will be better appreciated,

not only by the members but by the public as well. It took years to test the social and educational features of the Grange. In its early days this work was of necessity one of experiment, and its results were in doubt, but this work has now passed beyond the experimental stage and is now an assured success, known and acknowledged by all classes in society; but this success does not imply that all members of the Grange have become educated through its instrumentality; it only means that the Grange is a success as an education for our farming population, and great responsibility rests upon those who have this work in charge to so direct the thought of our farming population as will give them a better understanding of the principles of success in all that pertains to the work and management of a farm, a better knowledge of the ethics of government, a higher degree of enjoyment in the home circle, and an advanced position in relation to the affairs of State and nation. ALPHA MESSER. ROCHESTER, Vermont.

Legal Department.

CONDUCTED BY EARL D. BABST
56 Moffat Building, Detroit.

W. L. G., Wheatland, Mich.:—Please send a diagram of farm and fences and we will advise you next week.

TAX TITLES.—READER, Tuscola, Mich.:—The present session of the legislature up to date has made no modification of the tax law. As to the tax titles see our answer elsewhere to G. Y., Dushville.

TAX TITLES.—G. Y., Dushville, Mich.:—The facts involved in your question are too uncertain and complex for us to advise you intelligently. We can in no instance advise as to the validity of any particular tax title. We can only treat the question in a general way in this department. Would advise you to seek local counsel, or bring all the facts and papers to the personal attention of some attorney.

TAX TITLE.—B. S., Oak Grove, Mich.:—Is a tax title as good as any, or how good is it? The taxes on the piece of land I enquire about have not been paid in eleven years.—The supreme court has recently held that a tax deed gives absolute title under the law of 1891 if the proceedings have been regular. We cannot undertake to give an opinion on the validity of any tax title.

ACTION ON WARRANTY DEED.—SUBSCRIBER, Tuscola Co., Mich.:—B. buys 40 acres of land from C. and gets warranty deed of same. B. finds, when he goes to have it recorded, that back taxes have not been paid. C. pays them to the auditor-general and gets a tax deed for same. Can C. or his heirs hold the land?—C. should quitclaim to B., and if he refuses to do so he may be sued on the warranty deed.

ENDORSEMENT OF MARRIED WOMAN.—NOTICE TO ENDORSE.—W. J.:—My wife has a note against her brother and she signed her name on the back, supposing she signed all right and title away. I traded the note away and it ran some months past due. No notice was sent to her or to me. Who can be held for the note? Could it be collected from me?—In the first place, a wife cannot be held on an endorsement unless the note is given in some transaction affecting her separate estate or unless there is consideration for it. But in the case you cite neither the wife nor the husband could be held in any event, as no notice was given and this is always necessary in order to fix the endorser's liability.

JOINT TENANCY OF HUSBAND AND WIFE.—Querist No. 2, New Lothrop, Mich.:—A. in his will uses the following language: "I give, bequeath, grant and devise to my daughter B. and my son-in-law C., the survivor of them, all my real

estate in joint tenancy." B. and C. are husband and wife. What are the rights of B. and C. under the will during their lifetime? Can either one sell their interest without the other joining? Is the survivor the sole and only owner, absolutely, notwithstanding heirs?—In the language of the will the words "survivor of them" were needless and do not affect its legal construction. Under the statutes, and by the express provision of the will, B. and C. would hold as joint tenants, that is, both are seized of the entirety and the survivor takes the whole, notwithstanding heirs. Neither can sell his interest, for he has no separate interest; his interest is in the whole estate. In a sell both must join.

PAYMENT OF SPECIAL DRAIN COMMISSIONERS.—COMMISSIONERS DECIDE BY MAJORITY VOTE.—SUBSCRIBER, Brighton, Mich.:—Last November the Judge of Probate of our county appointed three persons as special drain commissioners who were notified by the county drain commissioner of their appointment. The commissioners examined the proposed drain and came to the conclusion that the drain was not necessary. They have not received any pay for their services. Can they collect their pay, and if so what proceedings are necessary?—Special drain commissioners are entitled to three dollars (\$3.00) per day for each day actually and necessarily spent in the discharge of the duties of their office. The township is liable for such compensation and may be sued on refusal to pay. 2. They had one set of special commissioners before, who went over the ground and decided two for and one against the drain. Do special commissioners have to agree like a jury, or does the majority rule?—We are of the opinion that commissioners decide by majority vote. Opinion based on 23 Mich. 418.

WASTE BY OWNER OF EQUITY OF REDEMPTION.—CUTTING TIMBER.—SUBSCRIBER, Fairgrove, Mich.:—A. mortgages a wood lot to B. The mortgage becomes due and past. B. forecloses and the lot is bid off to B. During the year of redemption A. cuts wood and lets C. a job of cutting wood on shares. C. cuts the trees down in lengths and splits part of them. The day on which the year of redemption expires, D., an agent of B., forbids cutting and splitting any more. A. had never been forbidden to cut timber. Had A. any right to take anything from the farm or allow others to? Has C. a right to what he has cut?—B. by his purchase had acquired an inchoate right to the land, subject to be defeated by payment, by the mortgagor, or of the purchase money, with interest, in one year. If not so redeemed, he had a right to have the land which he purchased, his title to which would then be complete. The trees growing on the land were a part of that estate, being a part of the realty, and A. would be entitled only to such timber as was necessary for the maintenance of good husbandry on the farm. Timber could not be cut for sale either by A. or his tenant C.

Excursion to 7 Islands.

First of the season, Sunday, May 30. Popular place for a day's outing. D. G. R. & W. (D. L. & N.) R. R. train will leave Detroit at 8:30 A. M., and leave Grand Lodge at 6:30 P. M. Round trip rate \$1. Bicycles and baby cabs free. GEO. DEHAVEN, G. P. A.

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Miscellaneous.

TENDERFOOT JAKE.

While en route to California in 1850, our party encamped one evening near the then small town of Kansas City, Mo. Early next morning as we were preparing to resume our journey, a big, awkward-looking fellow, apparently about twenty years of age, strolled up to the wagon and coolly proposed to join us.

"Why, young man, we're not in particular need of a tenderfoot just now," said our captain, Jim Saunders. "Besides, we can't afford to take a deadhead along. This outfit and four months' supply of grub cost a pile of money, and, judging from your size, you've likely got an able-bodied appetite. What's your name, and where do you come from, anyhow?"

The stranger raised a pair of honest-looking eyes and slowly answered:—"Waal, they call me Jake Trueman. I've bin sort of farmin' down on the Missouri bottoms, but hearin' of this California rush, I made up my mind to jine the first overland party that came along; so I sold my mawels and other truck, and here I be. I ain't no dead-head. I've got money enough to pay my way, and mebbe have some left to start me in California."

"It's all right, then, Jake," said the captain, "but what in thunder do you tote that hollow bar of iron around for, and what do those notches mean?"

"This old rifle's some better'n it looks; it ain't no slouch," rejoined Jake. "Granther Trueman fit with it into the revolutionary war, and I reckon it hasn't got no record to be ashamed on. I thought it might come in handy sometime, for I guess it kin outshoot any of them purty pircussion guns of yours."

"Perhaps so, if it ever goes off," laughed one of us, "but the notches, Jake, the notches?"

"Gran'dad—he lived to be 90—never told me what this short row meant, but this long one means deer, the next longest buffaloes, the next bears, the next wolves, the next wildcats, foxes and other varmints, and these four notches off by themselves means panthers. Gran'dad was a great hunter in his day and allers made a notch for every worthwhile critter he killed; so I reckon the old piece did go off now and then. But I hope I won't ever have to try it on Injuns, for they're the only human I'm scared of, and besides (reflecting) I've an idee that, if I ever git back to Missouri, my gal might like me to bring my scalp along. Her name's Sairy Ann Martin, and she's purty as a picture, but sort of particular 'bout some things."

"Don't bother yourself about that," consolingly said Saunders, "if your scalp goes the young lady won't have a chance to twit you with its loss."

"I dunno if that's so very comfortin', after all," meditatively replied Jake.

THE NIGHT WATCH.

Our outfit consisted of eight wagons and a little army of horses and mules, while the party, with its latest addition, numbered thirty-two men, three young married women, and Jessie Clayton, a lovely twelve-year-old girl, and the light and joy of the party, any one of whose original members would have risked his life to save her from harm. As for the young Missourian, he had not been with us a week before becoming the veriest slave to the winsome child, whose pretty ways, joyous spirits and merry chatter had completely won his heart.

"If there's anything on airth," he said one morning, as Jessie danced up to his side, "that could make me face a wild Injun, it's this young un. She's purty as—as my Sairy Ann, and gooder, I reckon, than she's purty."

We had passed through Kansas, Colorado, and the southeast corner of Utah without more serious annoyance from Indians than a slight altercation with a wandering band of Pah Utes. One Saturday afternoon, however, we encamped rather early near an affluent of the Rio de Shelby, and almost in the shadow of Squash mountain, designing to rest over Sunday.

Although we had not seen any Indian "sign" for days, and had no apprehension of an attack, the eight covered wagons were, as usual, arranged in a hollow square, into which, after filling themselves with grass, the horses and mules would be driven for the night.

For some unexplained reason, the three women and little Jessie had lately got in the habit of sleeping by themselves in one of the wagons, and this was always placed next to the one occupied by the husbands, so that the latter would be within easy call. Owing to this arrangement, there was no wagon berth left for Jake Trueman, who generally rolled himself in a blanket and slept anywhere—often outside the corral, on the ground.

Before it grew dark that evening our guide, as a mere matter of routine, made a careful scout to the bottom of the foothills and, on coming back, reported that not a hoof print nor moccasin track was anywhere to be seen.

"The reds won't find us out for a day or two," he said. "We'll have a quiet night and a good sound sleep; but still the guard squad better take turns at duty, as usual."

We did have a quiet night, but just before daybreak in the morning a deplorable thing happened. Whether the sentry on duty had slept at his post, we never knew, for the poor fellow was found dead with a knife in his heart. He had been so quietly and surely struck that, whether asleep or awake, he had no time to give an alarm,

nor had any of us heard the slightest sound, until a series of frightful yells a short distance away suddenly aroused us to the fact that a large body of Indians had stolen on us unawares. But they seemed to be retreating! How was that? A question quickly answered, for on springing up, rifles and revolvers in hand, we found to our dismay that one of the wagons, the one containing the women, had been rolled out fifty yards on the plain, and that every last horse and mule was gone.

All had been so deftly and silently done that not a soul in camp had awakened; and now, having gained a good start, the savages had remounted their ponies, and, with waving blankets and hideous cries, were stampeding the captured stock mountainward.

SUSPICIOUS.

Greatly wondering why we did not hear an outcry from the women, a dozen of us rushed toward their wagon, drew its canvas door aside and found it empty! The late inmates must have lain down fully dressed, for, save four pairs of shoes, no part of their everyday apparel was to be seen.

On realizing their loss, the bereaved husband's raved like madmen, and one of them would have ended his misery by a pistol shot had not Ingram caught his hand and reassuringly said, "We'll rescue the women before night, or all die together. No harm will come to them before then."

"My God, Dave, they'll be 50 miles away before night, and we haven't a horse left!" cried the despairing man.

"No, the Indians will go only a little way into the foothills just now. They'll never lose sight of this outfit till they've taken it or have got a thundering good licking," replied the guide. "Now half a dozen of you go to work and fill everything in camp with water. There's no telling how soon there'll be a couple of hundred Apaches between us and the river, nor how long they'll keep up the siege. Where's that big tenderfoot? He's just the fellow to carry water."

Where, indeed? Jake was nowhere to be found. He and his heavy rifle had totally disappeared.

"I've always thought that miserable skunk was a coward," muttered Jim Saunders, "but there's one comfort—his certain sure to be scalped. It's an awful pity, though about the rifle."

"If the reds do come," resumed Ingram, "we'll be all right, for they'll leave the cattle and the prisoners in the hills with a light guard, and while some of us keep the main body busy here, others can sneak up through that range of rocks to the left and likely effect a rescue."

We had scarcely buried our dead comrade, filled every available vessel in camp with water, and eaten a sad breakfast, when a big band of mounted, war-painted Apaches, numbering at least 125 warriors, came sweeping down to the north of us, but out of rifle shot, and, to our unbounded astonishment, we saw that encircled by this crowd were our horses and mules! The beasts were strung together by lariats, and on each one of four horses sat a prisoner, who was tied, man fashion to the rude saddle.

Why the Indians had not secreted the captive women and animals in the hills we could not at first understand; but the mystery was quickly solved. Keeping carefully out of range, they made a slight detour, and finally took up a position on the river bank directly opposite, and about 300 yards from the corral. Then they picketed the horses and mules, head to tail, in a long line in front of themselves, the prisoners being placed at intervals along the line. As there were thirty-two mules and twelve saddle-horses the hostiles thus had a living bulwark more than long enough to shield the whole front of their column should we be so rash as to come a hundred or two of yards nearer and open fire, regardless of the purposely exposed women, which they well knew we would not do.

"By the jumping Jupiter!" exclaimed Ingram, "old Big Ben himself must be in command of the redskins, for there's not another Indian on the plains has sense enough to make a move like that. It's a bad fix for us, boys. It means a hand-to-hand fight at odds of four to one, for, even if it wasn't too far for our rifles, we can't do a thing while that row of cattle is there, not to mention the risk of hitting the women; and boys!" he solemnly added, "they've got to be rescued before night, or their husbands must shoot them."

"Lead on, Dave, lead on; no more talk," said Tom Graham, Jessie's brother-in-law.

THE LONG RIFLE.

We had not waited fifteen minutes before a startling thing occurred. About 100 yards from the corral, and fully 400 from the beleaguering Indians, there jutted out from the foothills a lofty and seemingly inaccessible crag. While we watched our now motionless enemies, a puff of smoke rose from the top of this cliff, a rifle report was heard, and the next instant we saw one of the Apache warriors tumble headlong from his pony.

"God forgive me!" exclaimed our captain, "I've wronged Tenderfoot Jake. That's the crack of his big rifle. He slept out last night and was not seen by the reds this morning. Then he's followed in the ruck of the stampede to mark the band down. After hiding for a while, and seeing no chance of doing any good, he's seen this last move and has somehow climbed that rock, to do—what we've seen him do." All of this guesswork proved substantially correct, but Capt. Jim had scarcely finished speaking when another warrior dropped, then another and another, until, in the space of three or four minutes, six had fallen. Evidently the concealed marksman was an adept at quick re-loading, and, shooting from so great an elevation, his bullets passed safely over the line of

horses and mules into the ranks of the Indians.

On seeing the sixth man fall the superstitious braves, although well knowing whence the fatal shots came, were stricken with deadly terror, for they could not for a moment believe that, unless aided by the Great Spirit, any mortal could scale that rock, or any gun forged by mortal hands kill at such a distance. (I may state here that in those days frontiersmen and hunters generally used small charges of fine powder in their rifles, and from 150 to 200 yards accurate shooting was considered a long range.)

As we curiously watched the fast increasing confusion among the savages, a seventh warrior fell, so utterly demoralizing the band that a stampede seemed imminent, but at this juncture a feather-bedecked chief—Big Bear himself, as we afterward found—rode out from the throng, passed around one end of the picketed line of animals, and with uplifted tomahawk approached the nearest captive, Jesse Clayton, as it chanced. His murderous intent was only too evident. Nothing, we thought, could save the child, and we closed our eyes in horror. But now that death-dealing report rang out once more, and we opened them again to see the huge savage throw up his arms and drop to the ground within six feet of his intended victim.

"Twas a wondrous shot, one that only a man of iron nerve and supreme skill could, under such circumstances, make."

JAKE'S VINDICATION.

No longer able to restrain ourselves, we broke into round after round of frantic cheers, while the awe-stricken Indians, confirmed in their belief that the Great Spirit was fighting against them, lost their heads entirely, left the stolen stock and prisoners behind, and scurried in crazed affright toward the mountains. Aiming to pass on that side of the corral farthest from the fateful crag, they had necessarily, owing to the ridge of rocks already mentioned, to come within 100 yards of us. Knowing that while they passed at topmost speed we could do them but little damage, yet being minded to avenge our murdered comrade, and punish the abduction of our women, we rushed out at right angles to their course, and drew up in single file across it just in time to intercept them, and pour a volley which emptied a half score of saddles. But now the demoralized savages, seeing that they were still nearly four to one, and confronted by merely mortal enemies, took heart of grace, delivered a flight of arrows, which slightly wounded several of us, and then prepared to charge us while, as they thought, all our firearms were empty, the deadly revolver being as yet unknown to them.

"Rally on me, boys!" shouted the guide, and in five seconds we had formed a hollow square, from every face of which, as our assailants rode around and around it, flamed out a continuous fire of pistol shots, to their utter amazement and consternation. Again superstitious terror overcame them. They fell fast before this mysterious rain of bullets, which were, they doubtless supposed, "bad medicine," sent in anger by the Great Spirit to destroy them. Not knowing that they had already wounded eight of us, that our revolver chambers would soon need reloading (no copper cartridges then), and that a resolute hand to hand contest must, from their superior numbers, result in victory, they gave up all show of fighting, shied off in affright and began a precipitate retreat.

"Cease firing. Let them go, boys. They'll never trouble us again," said Captain Saunders.

But Fate was against the redskins. The

foremost warrior had not gone fifty yards when he, as well as we, saw Jake Trueman hurrying toward us to take part in the fight, whereupon the exasperated brave rode straight at him, but only to fall with a bullet through his brain before he had come within thirty yards.

Maddened by this sight, a score of warriors, sure of at least one consoling scalp, swerved from the line and quickly surrounded the young giant, who, while we were running up, was battling for his life, and to some purpose. Whirling the ponderous rifle around his head as an ordinary man might do a two-handed singlestick, he not only guarded himself, but brought down an enemy at every stroke. When we, who had occupied about ten seconds in our rescuing race, came up and dispersed the remaining braves by our mere presence, we found that no less than five of their comrades had fallen, with crushed skulls, before the Missourian's mighty arm, while he had received only a trifling wound from a thrown tomahawk, the thronging savages having so impeded each other in their eagerness that none could close with him.

Pressing around the gallant fellow, we almost overwhelmed him with congratulations, while Saunders seized his big right hand in both his own and frankly said:—"Jake, we've worried you time and again with our foolish talk, and on behalf of the whole crowd I humbly ask your pardon."

"Why, that's all right, Jim. I haven't got a thing 'gainst any one of you. I knowed you'd find me out some day. But is little Jesse safe?"

"Yes, God bless you, Jake. You saved her life when no one else could have done it," replied Tom Graham.

THE BICYCLE IN THE MILITARY SERVICE.

The German military papers have just published the report of the Minister of War regarding the results of the introduction of bicycles into the army and the training of a bicycle corps during the year 1896. A large number of experimental runs were made and the bicycles were also employed in maneuvers to advantage. The average of the runs was about fifty-five miles, with an average speed of nine and one-half miles per hour, including stops. The greatest speed obtained was twelve miles per hour in a run of thirty miles. The greatest distance covered in any one run was one hundred and thirty miles, but the speed did not exceed eight miles an hour, including stops. The soldiers attached to the bicycle service were given practical training on the wheel, but also received instruction in reconnoitering, reading of the map, etc. Not long ago Lieutenant von Puttkammer tried to dispatch a message by relay bicyclists going and coming a distance of twenty-eight miles. He had placed four relays of three bicyclists each at points six miles apart and three dispatches were taken each way, the cyclists' speed exceeding thirteen miles per hour. It is estimated by the Minister of War that after forty days' training a company mounted on bicycles should be able to cover one hundred and twenty miles a day with full arms and equipment. The present weight of the military bicycle, which is of the folding type, is thirty-two pounds, but the new type, of which a large number has been ordered, will weigh six pounds less. The principal economy will be found in the abandonment of chain gearing and the substitution of a cog-wheel driving gear.



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The Dairy.

For the Michigan Farmer.

CALVES SUCKING EACH OTHER.

Do you know of any sure preventive for calves sucking each other after feeding?

What is your opinion of the article in your paper a few weeks ago recommending putting in stanchions while feeding, and letting them remain for a half hour afterwards?

If you know any appliance that can be used, and where it can be obtained, it would greatly oblige, I. E. WOOD.

WASHTENAW Co., Mich.

[The stanchion is as good as anything we have seen or tried for the purpose of not only keeping each calf by itself while drinking, but preventing its sucking its companion's ears.

The most of the sucking is done when the calf takes its dripping nose out of the pail or trough. If it can find anything within reach, of a proper size and shape, it immediately lays hold and begins sucking. Whatever it grasps is quickly covered with milk and saliva and the calf hangs on until it "runs dry."

If the little calf can be fastened in a stanchion, or in some way so that it cannot reach its companion's ear, or any projection small enough to be taken in its mouth, until the mouth is thoroughly dry, it seldom learns to suck its companion. If this plan is followed from the first, there will be hardly a case of sucking. Of course there are exceptions. Muzzles are sometimes used, but we never liked them.—Ed.]

For the Michigan Farmer.

NOTES FROM A MICHIGAN DAIRY FARM.—No. 5.

Fifteen years ago the writer and his wife commenced the practice of winter dairying. We were young and enthusiastic, had been married but a short time, and of course life looked full of great possibilities even on a farm at that time. Farm products were bringing good prices and none of them better than butter, especially winter butter.

We had each been presented with a good cow by our respective fathers and we soon became enthusiastic over our small dairy. Our cows coming fresh in the fall gave us an opportunity of seeing what they would do with liberal feeding.

We knew nothing of balanced rations and certainly we had no Jersey blood to help us along, yet we became convinced that there was money to be made from winter dairying.

We kept strict account of feed and of butter made, and were prepared to confront anyone who doubted our policy with the figures defending it. Twenty-five cents a pound was nothing unusual for butter then, and this gave a good profit if one doesn't count their work anything.

We had a stone churn at first, but once when the wife was sick and the hired girl got on an ambitious streak, she knocked the bottom out with the dasher, losing the cream, so we next bought a wooden one. It had some kind of patent arrangement inside, and after a year or so was discarded for a barrel churn, which, by changing for a larger size every few years, as our herd increased, we have used ever since.

Some way I seemed to take naturally to cows, and my wife had from girlhood shown a decided inclination to butter making, so we were pretty well started on the road to dairying as far as our tastes were concerned. We tried to make the most out of our cows that we could, and at the end of every year footed up the long columns of sales and kept account of the amount of feed consumed.

About the first of September, 1884, we made our first shipment to Detroit. A relative residing there wanted someone to supply her with butter by the year, and the sample proving satisfactory a bargain was made at 25 cents a pound, net, by the year, and that was our first regular butter customer. From that one we have increased to 20 different families, all supplied with butter of our own make, and this without buying any milk, our own cows furnishing it all, and at times considerable by way of surplus. And through all the years which have come and gone we still supply that first customer with butter, thirteen years without a break.

You may talk about other branches of farming, but I contend that dairying is the most profitable one when rightly conducted. The day may have passed for extremely high prices, yet the prices of other farm products have fallen in even greater proportion. Our grain is worth less in proportion to the price of butter now than it was then. And who shall say that, even at 20 cents a pound, net, by the year, there is not more actual profit in it than in any other branch of farming at the present time? Anyone who makes good butter may, by a little effort, secure that price even now.

A good cow will make 300 pounds in a year, and that leaves a good margin after paying for her keeping. In fact I think the skim milk (which rears her calf), and the manure, which from concentrated food is of considerable value, are together worth about as much at the end of the year as it has cost to keep her, especially if she has a heifer calf.

It is useless to try to farm it these days without stock of some kind, and, according to my way of thinking, cows are as good property as anything. We raise about 50

pigs each year, and the surplus skim milk plays an important part in their growth. GENESEE Co., Mich. W. C. ROCKWOOD.

[So many farmers went into dairying several years ago, thinking there was lots of money in it, when they cared nothing about the business as a business, and even hated cows. The business has not paid any too well for some of the experts, and those who hated to keep cows have been slowly but surely falling behind.

Our friend Rockwood grew into the business from a small beginning, and loved it from the start. On this account he succeeded, and slowly but surely felt his way to that point reached only by the hardest work and a natural enthusiasm for the business.

We advise no one to branch out into dairying as a specialty, in these times, without having a natural love for cows. After studying over the experience of our leading dairymen, if willing to assume a large amount of daily confinement and hard work, we suggest that the amateur dairymen follow friend Rockwood's plan of growing into the business.—Ed.]

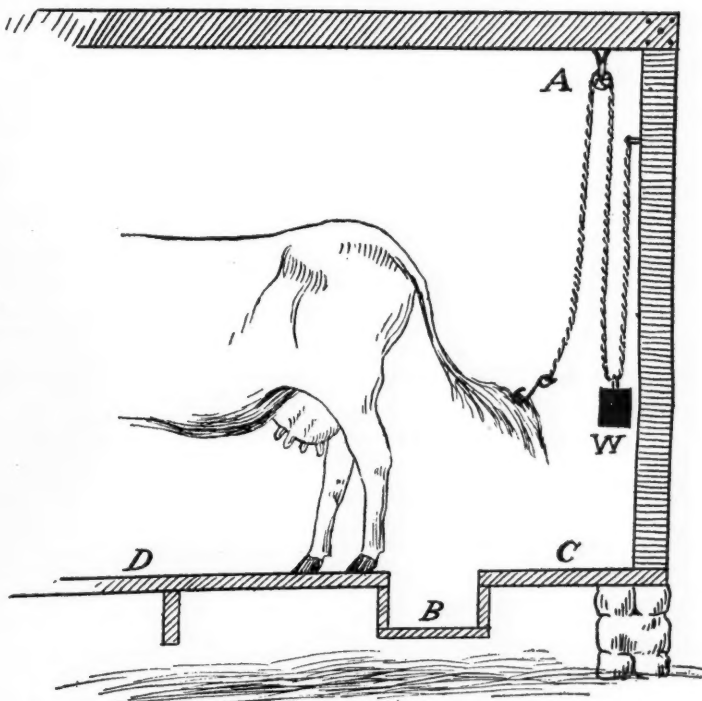
For the Michigan Farmer.

TO PREVENT TAIL SWITCHING.

I have been a reader of the MICHIGAN FARMER nearly all the time for the last twenty-four years, and have been fully repaid for the time I have "set around" reading it.

I saw in a late paper that some fellow was troubled by his cow's tail while milking. I have a device of my own invention in my stable, to keep a cow from switching.

Run a wire across the stable and fasten at each end to a beam or gilt near the back



TO PREVENT TAIL SWITCHING.

slide. Drive a nail five feet from the floor and eight or ten feet from one end, behind the cows. Hang a weight of about four pounds, with four feet of small rope on this nail.

Make a hook ten inches long, tie a stout string to the handle, hook the hook in the brush of the cow's tail, run the string over the wire and bring it down to the weight and fasten short enough to raise the tail even with her hocks.

This will answer for five or six cows. I have used mine over a year, and it saves me a great many hard words. Don't reject it until you have tried it. J. S. B. GENESEE Co., Mich.

[We have made a cut showing up the arrangement, according to the description given. We see no reason why the scheme should not work well.

As arranged, the plan would not work well in our cow stable. The alleys or walks are narrow, and when two or more men are milking, the hook and rope would be in the way of passing back and forth along the walk back of the gutter.

The cut shows the hook attached to the cow's tail. A is the wire, over which the rope runs freely. W is the four-pound weight. B represents the gutter, C the walk, and D the stall floor. We tried to make the cow represent the dairy, rather than the beef type, but our readers may call her a combination or "general purpose" cow, whether she looks like it or not.—Ed.]

INTELLIGENCE AND HUSTLE NEEDED.

An inexperienced dairy hired man is dear at any price. He should not be engaged simply for his physical qualifications in milking cows and cleaning stables. If he is not a competent dairymen you cannot conduct your dairy business profitably. He is the individual under whose care the cows

usually come most. On him devolve those little minor details of attention in the stable, which if neglected or are improperly performed, help to keep the cows down to a \$25 per year income, when it should run over \$50.

Show me the dairymen who depends on transient or inexperienced help, and I will show you the one who never realizes a profit from his cows. From my earliest recollections my life has been closely associated with milch animals, milk, cheese and butter, and I have studied with keen interest the evolution of dairying. While the general advance in methods on the farm and in the factory is not what it should be, in view of the diffusion of dairy knowledge, more money is now being made from cows than ever before.

Big dairy prices do not necessarily mean profit. The dairymen who depends solely on the condition of the milk or butter market to measure his profits, can never be counted as really successful.

That the times are desperately hard for all engaged in agricultural pursuits goes without saying, but yet it should be remembered that there is as much money in the country as there ever was, a portion of which stands ready to be exchanged for necessary dairy products. This should act as an incentive for dairymen to produce good butter and lots of it.

Dependancy is infectious, and I believe there are thousands of dairymen all over the land despondent at the hard times, who did not put forth half the effort they might and should, to make their business pay last winter. Now is the time to act, and by stirring briskly around you can make some profit by making your cows make milk. Action is the life of dairying, and unless you act, your cows will not. When I first embarked in the dairy business I wondered why I didn't make any money, but after a time awakened to the fact that I was expecting my cows to do it

all, while I stood by and watched their efforts.

Cows count for only half of dairy capital. Their owner or their manager counts for the other half. Thus you see how necessary it is that a dairymen should be as good as his cows.

1897 will prove a prosperous dairy year for those dairymen who strive individually to make it a success. Don't wait till next summer, but begin now, to-day, and you will see that by increased zeal and enterprise in feeding and care, the milk yield of your dairy will feel the stimulation even by to-morrow. GEO. E. NEWELL.

SHORTHORNS IN THE DAIRY.

From our Special English Correspondent.

There is a remarkable record of the milk yield of two Cheshire herds of cows in the Royal Agricultural Society's Journal, from the pen of Mr. Cecil Parker. The farms on which the cows are kept are those of the Grange and Woodhouse, on the Duke of Westminster's estate. Mr. Parker gave the details for the years 1886-93 on a former occasion, and he has now added those of 1893-96. On the Grange farm from 40 to 48 cows have been kept during the eleven years, and the average milk yield per cow has been 671 gallons. On the Woodhouse farm the number of cows has ranged from 38 to 48, their eleven years' average having been 587 gallons per cow per annum. Why the yield has been so much greater on one farm than on the other, Mr. Parker does not explain. On both the cows are Shorthorn crosses, similar to the ordinary Cheshire cows, but with a little more Shorthorn blood in them. One cow gave 1,483 gallons in 1896, another 1,378, and a third 1,257 gallons. Seven cows gave over a thousand gallons each. During the eleven years there have been fifty yields over a thousand gallons. No fewer than twenty-seven different cows have exceeded this high yield during the eleven years. Perhaps the most remarkable feat of all is the production of 1,463 gallons by

one of the cows in 58 weeks. Most of these high-yielding cows were from six to nine years old, and all were over three. This shows the advantage of keeping good milkers till they are quite old, instead of selling all off at a certain age, whether good or bad yielders. Summarizing the whole of the results at both farms for eleven years, Mr. Parker brings out an average yield from between 80 and 100 cows of about 530 gallons per cow per annum. Such cows pay well, even at the present prices of milk, butter, and cheese, whatever may be done with their produce, and the main object of dairy farmers should be to breed or purchase animals of this degree of excellence. AGRICOLA.

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DETROIT, SATURDAY, MAY 22, 1897.

This paper is entered at the Detroit Postoffice as second class matter.

Hon. John T. Rich and A. A. Wood, President of the Michigan Merino Sheep-Breeders' Association, are in Washington in the interest of wool-growers. They will do what they can to have the skirting clause in the wool schedule modified so that "skirted" fleeces will pay a fair duty in comparison with that levied upon whole fleeces.

It is with much regret we announce the death of Mr. John F. Whitmyer, of Ionia, at the early age of 36 years. He was a correspondent of the FARMER, writing mostly on horticultural topics, in which he took great interest. He was a public spirited and active young man, and his death is a great loss to the community where he lived.

The West Michigan Fruit-Growers' Association will hold their summer meeting at Holland, commencing Wednesday evening, June 24, and continuing until Friday noon. The Ottawa Horticultural Society and Michigan Forestry Association will join in the meeting. An elaborate program is being prepared, and an interesting meeting expected. Questions and suggestions for discussion should be sent to the secretary, R. M. Kellogg, Three Rivers, Mich.

It is not many months ago since a few members of the National Wool-Growers' Association met in convention and elected Frank P. Bennett, of the *Wool and Cotton Reporter*, vice president. He was also intrusted with the publication of an "organ" of the wool-growers. We have always insisted that Mr. Bennett's interests were with manufacturers, and that when their interests came in conflict, Mr. Bennett would be found in line with the manufacturers and opposed to the wool-growers. In commenting upon the changes made in the tariff schedule by the Senate Finance committee, Mr. Bennett says in his paper: "The protection which the Senate measure grants our various business interests is adequate to their profitable pursuit, but is designed not to be burdensome to consumers. The committee has had these two great requisites carefully in mind, and has apparently subordinated every other consideration to them."

Yet no man knows better than Mr. Bennett what a fraud is perpetrated upon wool-growers by the wool schedule of the tariff bill. Judge Lawrence is protesting loudly against the iniquity, as president of the Wool-Growers' Association, while Vice-President Bennett is telling what a fine thing it is. We hope Judge Lawrence knows Mr. Bennett better now than when he was urging his selection to the position of vice president. We believe Mr. Bennett's motive from the first was to use the position to help the manufacturing interests at the expense of the wool-growers.

FOREIGN MARKETS FOR AMERICAN BUTTER.

The Secretary of Agriculture is attempting the task of opening a larger market for American butter, with a view to assisting the dairy interest. A dispatch from Washington says:

The development of the dairy interests of the United States is one of the favorite schemes of Secretary Wilson, who believes that the farmers of this country can be greatly benefited by the sale of the incident products of the farm. In the matter of butter, it is thought that there is a much better opportunity for pushing our products at this time. Our exports of butter have been comparatively small in the past, and butter shipped abroad has been almost entirely, until last year, of inferior quality. This was due to the fact that the choicest grades commanded a higher price in this country than could be obtained for them abroad. But last year there was a surplus of good butter produced in the United States. The percentage of high grade creamery butters produced promises also to increase annually hereafter through the extension of the creamery system. Last year the consumption of the choicest grades fell off in the United States owing probably to the hard times. The price naturally fell and about 20,000,000 pounds were placed in the reach of the exporters, as against 5,500,000 pounds in 1895. A large proportion of this exportation was good butter. Denmark, Sweden, France, Canada, Australia and Argentine now supply the British market, which last year bought 281,000,000 pounds.

"At the suggestion of Secretary Wilson, the agricultural department has entered upon a series of experiments for the experimental sale in London of our best butter under its own name. By direction of the Secretary, Maj. Alvord, about two weeks ago, purchased and shipped about 2,000 pounds of our choicest creamery butter. It arrived last Thursday at Southampton. Under arrangements previously perfected this butter probably already has found its way to the consumer through the ordinary channels of trade but was shown and sold as United States butter. This will be followed through the hands of the jobbers and retailers to the consumer, and the judgment of each secured upon it. Other shipments will be made from time to time."

We shall await the result of this shipment with interest, as if it meets with fair success it means a great deal to American dairymen. Up to now little American butter, and that of inferior grades, has been offered in the British market. Better prices for choice butter could be realized in our home markets than abroad. The shipment referred to abroad consists of three-quarters of a ton, put up in packages of various sizes to determine, if possible, which is most satisfactory. The shipment went on the steamship St. Paul, and in cold storage. The butter came from the Iowa Agricultural College and a Vermont creamery, so the East and West are both represented.

In this connection we give a few extracts from a letter just received from our Paris correspondent. It will be seen from what he says that foreign governments are taking a hand in the butter trade also, and that the ultimate result of the competition will be to force values down to their lowest possible range, the victory remaining with those who can supply it of as good quality, and just a little cheaper than their competitors:

The butter question is commencing to receive most serious attention. Shipments are on the decrease and prices on the "drop." Competition is given as the cause, but the absence of co-operative creameries is the real explanation. Only think that in Normandy, the real centre of dairy or rather of butter farming, there is not a single co-operative creamery. Effort is thus wasted, and unnecessary cost of production incurred. In Germany, Denmark and Ireland, the co-operative dairies tend to rapidly increase. These continue to undersell French butter, in the English market, where at one time it had annual sales amounting to 300 million francs. The Australian butter commences to grip also the British market—a rival more for France. The Normands are proverbial for their shrewd heads, and their rigid economy, and it is next to a mystery why they accept a disadvantageous situation. Perhaps they are too well off, for they are all rich; they have the finest grazing land in France, an excellent breed of milch cows, and own their own farms. If once the practice was started of working up the milk of dairies in common and shown to be profitable, the other farmers would follow like the sheep of Panurge. And it will come to that.

The war against margarine goes bravely on. While the purest parcels of French butter command the top price in the London market, the great out-put of butter is not expected to hold its own against the produce of Denmark and Finland, unless the employment of margarine be absolutely exhibited. How effect that?

It is very probable that the reorganization of the sanitary section of agriculture will lead to the governmental control of the exportation of butter, and of its grading and marking with guaranteed brands; the creameries themselves will not be exempt from inspection. Poultry and eggs are certain to be subjected to supervision in the matter of packing and preparation for the

market. In fact it is being found out that the better produce is prepared for the market, presented to the public, dressed up for purchasers, the higher will be the prices obtained.

So far as our home market is concerned, we regard it as in an abnormal position. The lack of profitable employment in the large cities, where the unemployed are trying to live on the product of potato patches, has cut down very materially the demand for butter. It is regarded as a luxury by many of our foreign population. With improved industrial conditions we look for a better demand, and at enhanced prices, for good butter. Some good to the business will also come from many quitting the business whose product is not equal to oleo. They are as great a detriment to the trade as cheap substitutes. The movement inaugurated by Secretary Wilson may find its greatest success in leading to the improvement of the quality of our butter, and thus extending its consumption among our own people.

SUGGESTIONS TO CORRESPONDENTS—GRADES OF WOOL.

To the Editor of the Michigan Farmer.

The MICHIGAN FARMER is a great help to me as a young farmer. If correspondents would be more particular in stating conditions and kinds of soil in reports of crops and manner of working land, their contributions would be more valuable.

Wheat and meadows are looking good in this vicinity. Oats mostly up, and corn ground nearly plowed. Expecting to plant this week, May 17. Soil mostly gravelly loam, some rolling.

I sheared my sheep last week. They averaged 5½ lbs. They are Shropshires with Southdown ancestors on dam's side. Heaviest fleece 8½ lbs.; longest wool as shorn, 5 inches.

Please explain terms used in market report of wool, as Delaine, ½-blood combing, fine X, ½-blood clothing, etc., and oblige, OAKLAND CO., MICH. JOHN, THE FARMER.

Our correspondent is right in thinking correspondents should always give the character of soil when relating methods of cultivation pursued with crops. A successful method on a light sandy soil will nearly invariably fail on a stiff clay. A great many of the differences in the views of farmers on the proper management of any single crop comes from the difference in the condition of the soils on their farms.

In regard to the grades of wool, delaine is a long-stapled Merino wool, coming from the sides and back of the sheep between the forward part of the shoulder and the coupling. It must have a staple at least two and a half inches long, and be of good style and strong in fibre. The Delaine Merinos are bred to produce a maximum amount of this wool in their fleeces; so are the Rambouillet, or French Merinos. Your wool will grade half-blood combing, as it is long enough in staple. But the bulk of half-blood combing wools come from grade flocks of mixed blood, but with considerable long-wool blood in them. Fine X is washed wool from ordinary Merino flocks, too short in staple to be classed as "delaine," but nearly every Merino fleece has more or less delaine in it. Half-blood clothing is the wool grown on grade flocks which have more or less Down blood in them, and are coarser and longer in staple than fine clothing or X wools.

GOVERNOR PINGREE is anxious to find out what ails the country, and for that purpose makes the following announcement:

LANSING, Mich., May 20, 1897.

To the student of any college in Michigan preparing an historical paper tracing the most accurate parallel ancient or modern history, with the present social and political conditions in the United States, and giving the causes of this parallel condition, I hereby offer a prize of \$25 cash; to the second best paper, a prize of \$15 cash, and to the third best paper, \$10 cash. Papers must be prepared and mailed to the executive office at Lansing not later than September 1, 1897. Judges will be announced later.

H. S. PINGREE, Governor.

The papers will no doubt vary greatly in specifying the causes responsible for present conditions, but in point they will all agree, namely, that it is the other fellow who is to blame, and he should be reformed at once.

THE changes in the wool schedule seem to aim at justice for all concerned, and if it becomes a law the wool-growers generally will be quite well satisfied.—Orange Judd Farmer.

The writer of that paragraph knows as much about the sentiments of wool-growers as a stub-tailed dog about the Koran. If those who claim to be working for the interests of the wool-growers know so little about their sentiments, is it any wonder the latter are sold out and defrauded whenever questions affecting them are up for settlement?

A REJOINDER ON THE FREE SEED BUSINESS.

To the Editor of the Michigan Farmer.

In your paper of May 8th you say, in regard to the free seed business, it is a bonus to the few at the expense of the many. Will you please explain how the money is raised to purchase the seeds? And undoubtedly the same thing may be said about the bulletins sent out by our State and Government Departments of Agriculture, because where one man is trying to keep posted and up to date on this vast subject of agriculture, there are ten of his neighbors who do not know anything about these bulletins and would not read one if they had it. I, for one, would like to hear from some of the rest of the farmers on this subject. Respectfully,

HILLEDGE CO., MICH.

R. O. HUMPHREY.

If the seeds were distributed in the same manner as the state and national bulletins there would be less cause for charging discrimination. The bulletins are sent on request to those who apply for them, and in this respect all citizens are treated alike. Seeds are sent out to particular individuals selected by senators and representatives. Our correspondent will readily see there is a radical difference between the two methods. A considerable number of the bulletins issued by the Department of Agriculture are only sent when ordered, and the price fixed for them must be sent with the request. This price is the net cost of the bulletins to the department. The money to pay for seeds and bulletins is taken from the regular revenues of the government, which come from customs duties, internal revenue taxes, etc.

THE idea of Senator Cullom of Illinois that a permanent tariff commission should be created to propose changes in the tariff is wholly impracticable and also unconstitutional. This is made, by the Constitution of the United States, the especial business of the people's representatives in Congress. It ought not to be, as it cannot be, delegated to any other body. The tariff commission idea is the notion mostly of men who distrust government by the people. Yet if wisdom cannot be found in the chosen representatives of the whole people, it will be hard to find it anywhere. An appointed commission given power to make changes in the tariff would be subjected to corrupt influences, which men who have every two years to run the gauntlet of popular criticism dare not allow to control them.—Boston Cultivator.

We are pleased to see a representative journal of Massachusetts, so long regarded as the home of the mugwump, (whose theory is that the people must be governed by commissions and similar bodies because they are incapable of governing themselves), come out flat-footed against such ideas as those advanced by Senator Cullom, of Illinois. The people constitute the court of last resort, and to attempt to usurp their rights in this respect simply shows lack of confidence in popular government. Let Senator Cullom ponder over the utterances of the grandest citizen of his State, Abraham Lincoln, and see if he can hunt up a suggestion showing a lack of confidence in the "plain people," or advising that their rights and privileges be delegated to commissions or irresponsible bodies unknown to the Constitution.

MAYOR W. H. MAYBURY showed both courage and fairness in sending a message to the common council protesting against the exemption of property held by various societies from taxation. Although holding a high position in one of the bodies which was to secure the greatest benefit from this unjust exemption, he opposed the proposition as unfair, illegal and disgraceful. We hope the Mayor will stick to the principle he lays down in his message, and that the people will sustain him in his fight for equal and exact justice to all taxpayers and exemptions to none. Those societies should be ashamed to ask such privileges at the expense of other taxpayers.

THE Greenville Potato Planter Co., Greenville, Mich., have got up a potato planting contest to test the capacity of their hand planter, and offer the following premiums to contestants: Five dollars to the man who unassisted plants the largest number of hills of potatoes with the Eureka Self-locking Hand Potato Planter in a single day of ten hours; \$5 to the man who unassisted plants the largest number of hills of potatoes with the Pingree Self-locking Hand Potato Planter in a single day of ten hours; \$2.50 to the man who unassisted plants the largest number of hills of potatoes with the Eureka Self-locking Hand Potato Planter in a single hour; \$2.50 to the man who unassisted plants the largest number of hills of potatoes with the Pingree Self-locking Hand Potato Planter in a single hour. All who wish to take part in the contest should address the company for particulars and conditions.

OIL COOK STOVES.

Numerous requests have been received urging us to again offer a line of oil cook stoves. We have been experimenting with the different kinds for some time, and are fully convinced that the "Blue Flame" oil stove is preferable, and that of all the Blue Flame oil stoves, "The Gem," manufactured by the Dangler Oil Stove Company, of this city, is the best. The Gem is the only oil stove having drawn seamless tubing, thus preventing the possibility of any smoke or odor. We are now prepared to offer these stoves to our readers believing them to be very best oil stoves made. In deciding which was the best stove, many things had to be taken into consideration. Most all stoves had some distinct point of merit, but in "The Gem" we found a combination of merit points which in our opinion makes it superior to all others. In economy of oil, powerful burners, simplicity of construction, thorough workmanship, first-class material, combined with beauty and general utility, with positive safety, the Gem takes the lead.

We offer them to our subscribers at a price which will make a saving that will pay for several years' subscription to our paper. Considerable space is given on another page in this issue, descriptive of the Gem stoves, and it is on account of the liberal amount of advertising we give them that we are able to offer them to our subscribers at so favorable rates. The prices are slightly higher than those we offered last year, but in order to get the "Blue Flame" we had to pay more, as the burner is more expensive to make. Still, on account of the power of the blue flame it will be found more economical in the end, as it will do the work quicker. The labor and heat-saving qualities of oil cook stoves commend them to all. We can guarantee the price we have made on these stoves for the season unless the price of iron advances, which there is some talk of; in that case the price of the stoves will also be advanced.

AN OPEN LETTER TO MICHIGAN'S SENATORS.

HON. JAMES McMILLAN,
United States Senate,
Washington, D. C.

DEAR SIR:—In the wool schedule of the tariff bill as reported by the Senate Finance Committee the duties on third-class wools have been increased by changing ad valorem to specific, and some increase in the rate in addition thereto. This is only doing justice to the Western or ranch wool-grower, whose wool comes into competition with third-class wools of the better grades. While this act of justice has been done to the Western wool-grower, the wool raisers on the cultivated farms of the states east of the Mississippi River have had the duty on their wool reduced from eleven cents to eight cents, or practically to nine cents per pound. With a view of passing a moderate tariff bill which, while preserving the industry, does not create a monopoly or unnecessarily burden the consumer, eight cents per pound duty on unwashed whole fleece wool of the first class may be considered reasonable. But when skirted Australian wool is admitted at nine cents a great injustice is done to the American grower of fine wools. This wool has been described so frequently that I will not go into details; but it is sufficient to state that its market value is about the same as the American washed wool. That is, the skirted and selection of the better quality of fleeces increases its value per pound about the same as washing the wool on the sheep in the ordinary way.

The bill provides for doubleduty on washed wool and an addition of one cent per pound on skirted wool. As you will readily see, this reduces the protection nearly one-half to the American wool-grower. It is sometimes said that this wool does not directly compete with any American wool. This is not true, because there is no kind of wool grown in Australia which cannot be grown in Michigan. It is, however, true that at present it would be difficult to get the large amounts of wool of uniform character done up without the skirts, that can be found in the London markets of Australian wool. But Australians come here to purchase rams, and sometimes ewes, with which to improve their flocks. They have also crossed with the English down sheep, thus producing the cross-bred wool which now seems to be a favorite with manufacturers. A similar wool is now raised in nearly all of the northern states, produced by crossing the "Merino" with the "Shropshire" and other coarse or middle wool sheep, and forms a large percentage of the wool raised on farms, and to some extent on the ranches. If this wool is protected by a duty of twelve cents per pound (although it ought to be fifteen cents) the amount of this wool raised would be greatly increased in the near future. If manufacturers prefer to have it done up without the skirts, as is now done in Australia, it can be rapidly and safely brought about by making such dis-

inction in the price as will make it an object to change the methods of doing up and marketing the wool.

It is sometimes asked, Why not raise some other kind of wool, or let the manufacturers import this wool? First, because this is the kind of wool most profitable for farmers to raise if they are protected from ruinous competition. Second, if properly or reasonably protected the American grower will, in the near future, furnish all the wool of every variety needed by our manufacturers, with the possible exception of low-grade carpet wool.

There are some inconsistencies in the classification of wool, as it looks to me, although the raising of duty on wools of the third class renders this point less important. But the wool classification is one of blood, yet China lamb's wool is classified as first-class, the next fleece of the same sheep, two years old instead of one year old, is third-class.

Unless you are thrown into close association with the Michigan farmer, and realize how limited are his means for making money, you cannot understand how interested he is in this subject. There has never been a time when he has watched the course of legislation so closely or so critically as now, because there has never been a time when, in his judgment, legislation would have so much to do with the preservation of his farm and the maintenance of his family as now. I do not believe the changes suggested are unreasonable or unjust to any one, are of most vital importance to a great number of our people, are less than they had reason to expect at the hands of the present Congress, and less than other industries of less importance have received, notably lumber at \$3, at which the farmer feels only a little less aggrieved than upon the failure to give reasonable protection to wool.

An increase of \$100 in the average income of the American farmer would change the times from one of distress and panic to one of reasonable prosperity. It would cause such a change that the laboring man in the city would not starve while the farmer's home was sold on a mortgage because there was no sale for his products, and no one thing can do more to bring this about than a reasonable duty on wool, which can be accomplished by the slight though important changes suggested.

Sincerely yours,

May 15, 1897.

JOHN T. RICH.

SILBERMAN BROS., of Chicago, report the quality and condition of the wool received from Michigan this season, as much superior to the clip of last year.

We are in receipt of the catalogue of Shorthorn cattle comprising the herd of W. E. Boyden, of Delhi Mills, to be sold at auction. The whole herd is to be offered, and comprises more good individuals than were ever offered at a sale of Shorthorns in this state. C. C. Judy will do the selling, and no one will dispute the statement that he is competent to do it well. The sale takes place Thursday, June 3d, and you should send for a catalogue, pick out what you want, and be on hand to get it. There will not be such an opportunity offered to secure good Shorthorns in this State for a number of years.

NEWS SUMMARY.

Michigan.

A carload of shelled corn will be sent from Fowlerville to the starving people in India.

Farmers around Munith are sowing oats the second time, much of the first sowing having rotted.

A Saginaw man wants to build a \$10,000 flax mill in Flint, providing he can interest local capital.

It is reported that potatoes are improving in price at Northport and Traverse City, good ones having been sold there lately at 15 cents per bushel.

Owosso has erected a monument in memory of the soldier dead and will dedicate it Memorial Day, May 31st. Hon. James O'Donnell will deliver the address.

Charitably inclined people of Carleton have secured two carloads of corn for famine-stricken India. They also have enough cash contributed to pay the freight.

Gov. Pingree has appointed Dr. George Coester, of Detroit, to succeed Dr. Grange as State veterinarian, and the appointment will probably be confirmed by the Senate.

The legislature has passed the bill changing the name of the Michigan Mining School. In the future the institution is to be known as the Michigan College of Mines. It has also passed a bill designed to regulate the tuition fees.

The city council of Pontiac has at last agreed to allow the Oakland Electric railroad to enter that city. This road is being built from Birmingham to Pontiac and will probably be running cars by July. The franchise calls for a ten-cent fare between Birmingham and Pontiac.

A stock company has been formed at Hillsdale with a capital of \$50,000 for the purpose of manufacturing heating furnaces. If the council will give them the light and water needed, free of cost, and relieve them from taxation for five years, they will at once commence the erection of suitable buildings.

John Depree of Grand Rapids, Simpson V. Craig of Jackson, Fred. Hauck of Greenville, and Jay U. Elton of Clyde, O., are on

trial in the United States court at Grand Rapids this week. They are charged with having been connected with Frank and George Kingston, who were recently convicted of flooding the country with spurious greenbacks.

In his latest bulletin, Dairy and Food Commissioner Grosvenor calls special attention to the new laws which have been passed by the present legislature. These go into effect 90 days after the legislature adjourns, and he warns dealers in food products that they will be expected to have cleaned up their stocks and placed themselves in readiness to accept the new order of things by that time.

Several parties in the vicinity of Pontiac have had small quantities of wool, poultry, meat, grain, etc., mysteriously disappear of late. Last week detectives found some of the missing wool in a Detroit wool house, and a few days later the man who brought it in drove up to the same establishment with a fresh supply. He was arrested and taken to Pontiac.

John B. Dyar, for twenty years a successful business man of Detroit, gave bills of sale last week, transferring over \$200,000 worth of property and securities to a trustee for the benefit of his creditors. Dyar has been prominently connected with the Commercial National bank, Sectional stove works, Detroit Time Register company and other large enterprises. For the past year he has been securing franchises and arranging to build an electric railroad from Detroit to Port Huron and it is believed that it was this enterprise which caused his embarrassment.

Kalamazoo's large city debt has been causing the officials and citizens of that municipality no little uneasiness of late, but it now seems probable that the charter will be so amended that the debt can be paid. At the request of 40 taxpayers the city has asked that the charter bill now before the legislature be amended so that the city tax cannot exceed \$1.70 per \$100; that the present indebtedness of \$120,000, which is \$60,000 above the limit, be legalized; that the indebtedness be decreased at the rate of \$30,000 a year with interest; that the city council shall not have power to create any debt beyond the amount of the annual tax levies.

General.

The strawberry season has opened in Missouri and one horticultural association advertises for 10,000 pickers.

Ex-Senator Richard Coke, of Waco, Tex., died last Friday. He represented his state in the U. S. Senate for 18 years, his last term expiring two years ago.

Six passenger coaches on the Atchison, Topeka & Santa Fe road went through a trestle near Ardmore, I. T., Sunday morning. Fifteen persons were injured, some of them fatally.

A terrific hail and rain storm is reported to have swept over the country west of Fort Reno, Ok. The wheat crop just beginning to ripen was cut off and beaten in to the ground.

The forty-inch lens for the Yerkes telescope at the University of Chicago is at last completed and has been shipped from Boston to Chicago to be placed in position at the observatory at Geneva, Wis.

A magnificent bronze statue of George Washington was unveiled at Philadelphia last Saturday. President McKinley unveiled the statue and delivered an address. In the evening there was a grand parade.

Judge Gibbons, of Chicago, has decided that the American Tobacco company, the legal name of the tobacco and cigarette trust, has no right to do business in Illinois, and that by selling its wares there it is violating the anti-trust laws of that state.

Stephen R. Mallory was elected United States senator from Florida last Friday, thus ending another long struggle for the coveted position. Mr. Mallory is a native of Florida. He served in the Confederate army and also in the navy. He has been a member of both branches of the state legislature and also of the national house of representatives.

On Monday Pres. McKinley sent a brief message to Congress calling attention to the condition of affairs in Cuba and recommending the appropriation of \$50,000 to be used in relieving American citizens who are now in Cuba without means of support. The Senate quickly passed the relief resolution but in the House the resolution was sidetracked by Mr. Bailey who wished to attach an amendment recognizing the belligerency of Cuba. Mr. Dingley objected and the House adjourned without further action.

The Kentucky legislature is said to be determined to put an end to lawless raiding and mob lynching and is considering the most rigorous law ever placed on its statute books. It requires jailers and other officers holding persons threatened with violence, to arm the prisoner that he may defend himself, and to protect the prisoner with the aid of a posse at the peril of forfeiting their own offices. It makes it mandatory upon

the county judge to furnish not less than two nor more than 10 armed guards, summoned from among the citizens, who are compelled under heavy penalty to protect for 30 days any toll gate or other public or private property threatened by raiders, and provides pay for guards and severe penalties for all offenders captured.

Foreign.

Peru has discontinued the importation and coinage of silver in order to prevent further depreciation of her money in the markets of the world.

The town of Hochioji, Japan, was entirely destroyed by fire last week. About 4,000 buildings were consumed, and between 40 and 50 lives were lost. The town was in the great silk district of Japan.

Spain, according to the war office statistics, has sent, up to the end of 1896, 188,047 men and 40 generals to Cuba. The deaths in the field and from yellow fever and other diseases were four generals and 22,731 men and officers. No account is given of men sent home invalided, but at least 23,000 have returned, many of whom have since died.

A Russian railway train loaded with soldiers was wrecked one evening last week. The disaster was due to an embankment having been undermined by recent floods. Fifteen covered trucks filled with soldiers and two second-class carriages were shattered. In the panic many soldiers jumped into the water and drowned. Nearly ninety dead soldiers were taken from the water and from beneath the debris, and 93 injured men were conveyed to the hospitals.

The latest reports from Turkey and Greece tell of the cessation of hostilities. Although the sultan was at first inclined to be quite arbitrary in his demands, a direct appeal to him from the czar of Russia has had the effect of making the sultan much more liberal. The czar asked that the Turkish troops cease fighting and allow an armistice to be arranged. This request the sultan acceded to and the Turkish commander was directed to confer with the Greek leaders and arrange an armistice pending negotiations for peace.

When writing to advertisers please mention that you saw their advertisement in the MICHIGAN FARMER.

FOR SALE—Only complete Creamery and Cheese Factory in Steuben county, Ind. Rich farming community. Town of 2,500. Run but six months Good reasons for selling. For complete list and terms address LOCK BOX 555, Angola, Indiana.

SEED POTATOES. Carman Nos. 1 and 3, Sir William, World Fair, 40 cents per bu. Great Divide, Green Mountain, Magpie Murphy, Rutland Rose, 35 cents per bu. American Wonder, Rural New Yorker, Monroe County Prize, 30 cts. per bu, bags free, f. o. b. Cash with order.
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SILOS. How to build them and what kind of material to use. Send for descriptive circular and 32-page tank catalogue.
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In order to introduce our Cameras in your locality we will send one free to the first who will send us the names of ten people, with 50c. for packing, express, etc.
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Practice in all courts; Collections made anywhere in U. S.; special attention to law of the farm. Attorney for Lawrence Pub. Co., also other references.

THESE FIGURES ARE YEARS, YEARS IN WHICH, IN SINGLE INSTANCES, PAINS AND ACHES
10 **15**
Rheumatic, Neuralgic, Sciatic, Lumbagic,
20 **30**
HAVE RAVAGED THE HUMAN FRAME. ST. JACOBS OIL CURED THEM. NO BOAST; THEY ARE SOLID FACTS HELD IN PROOF.

The Household.

CONDUCTED BY MRS. ELLA E. ROCKWOOD,
FLINT, MICH.

We should be pleased to have any of our readers who take an interest in household topics, send in their views and opinions upon any subject which is under discussion, or which they wish discussed. The invitation is general, and we hope to see it accepted by many. Address all letters for THE HOUSEHOLD to Mrs. Ella E. Rockwood, Flint, Mich.

LIFE.

A crust of bread and a corner to sleep in,
A minute to smile and an hour to weep,
A pint of joy and a peck of trouble,
And never a laugh but the moans come double;
And that is life!

A crust and a corner that love makes precious,
With the smile to warm and the tears to refresh us;
And joys seem sweeter when cares come after,
And a moan is the finest of foils for laughter;
And that is life!

—Paul Lawrence Dunbar.

HOME CHATS WITH FARMERS' WIVES.

OUR FEATHERED FRIENDS.

Of all the many pleasant features connected with life in the country one of the pleasantest is that we have with us the birds. Perhaps some of us are too busy to give them more than a passing thought, yet if we only stop to enjoy their songs, or to study them even a very little as they flit about the trees building their nests and caring for their young, we can but be benefited thereby. To the true bird lover they are a never ceasing source of delight, and the thought that they are diminishing in numbers perceptibly with each passing year brings a feeling of sadness.

One of the most attractive of all the birds which come to us at this season is the oriole, or golden robin. While its notes do not have any particular musical merit such as distinguishes some of the others, its brilliant orange coloring and peculiar song always makes it a welcome visitor about the farm house.

A pair of these make their nest in one of the large silver maples within twelve feet of our kitchen door almost every year. Last year no less than three such nests were built in our yard. Elm trees seem to be sought after by these birds more than almost any other variety, as the long, drooping branches furnish excellent foundation for the deep, hanging cradles of the little birds. Year after year a large drooping elm which stands just beyond the garden, overhanging the bank of the creek, is chosen as a building spot by the orioles, and although the branches are completely over the water upon the side where the nest is built the parent birds seem to consider it a safe place for their nestlings. Looking at them always reminds me of the old nursery rhyme

"Rock-a-bye baby up in the tree top
When the wind blows the cradle will rock,
When the bough breaks the cradle will fall
Down will come baby, cradle and all."

But the cradle does not fall, because the bough does not break and the tiny fledglings are safe inside, swaying with the passing of every breeze until they are strong enough to fly. In fact the construction of their cradle makes it about impossible for them to fall out if they tried.

Then there is the brown thrush, or brown thrasher as he is sometimes called. We were always told when we were young that when he came, corn planting time was at hand. Father used to tell us that the brown thrasher said, "Plant your corn, plant your corn; cover it up, cover it up; hoe it, hoe it!" and every time I hear the familiar notes I can trace a strong resemblance to those words. See if you can't the next time you hear one!

The bobolink is a sweet singer, and his vocabulary covers quite a large ground. He is the rice bird, or reed bird of the South, and is there considered a great delicacy for the table. Here he is protected by law, and even if he were not no one would think of such a sacrilege as killing and eating him. According to paternal interpretation this bird says, "O-rangle, o-rangle, ding-dangle, checker-berry, checker-berry, ca-nu, ca-nu!" and I can well remember two little girls in sunbonnets and pink calico aprons (high-necked and long-sleeved after the fashion of those days) sitting on the grass in the field where father was at work, trying to follow the birds in their song as they flitted over our heads. Happy, happy days of childhood! thank God their memory is ever a pleasant one.

The cat-bird is one of the most interesting

of all our feathered friends, for we have no better friends among God's creatures than the birds. His powers of mimicry are wonderful and it is amusing to listen to him. He is a perfect busy-body, always up to some mischief. He seems to me about the most intelligent bird we have. His bright, sparkling eye, his saucily posed head and inquisitive manner always remind me of some little old lady who loves a bit of gossip with her friends. He wants to know all that is going on.

Among the other birds are the robin, the chipping bird, the phoebe, the meadow lark and many, many others. The robin, the phoebe and the chipping bird are very fond of human companionship and may be found about any farm house during the spring and summer. The wren is a very interesting bird and its notes seem to be a repetition of the words, "see the little wren-wren-wren-wren!" This bird will build its nest in anything placed for its accommodation, an old teapot or other receptacle being utilized in this way very quickly if suspended about the house or outbuildings in a convenient location. Wrens are voracious insect destroyers.

The blue jay tries me very much. He is a pretty bird—but "fine feathers do not make fine birds," and he is certainly very disagreeable toward other birds. A robin was trying to build her nest in one of our maples a few weeks ago and as fast as she deposited a mouthful of grass in a crotch of a tree and left it to secure another, Mr. Blue Jay followed and threw it out. The foundation for her nest was laid repeatedly in place after place and the meddlesome jay kept destroying it until at last, discouraged, she flew away to the orchard.

I want to make an appeal, (which I hope is not really necessary) to all in regard to these and countless other varieties of birds. Very few of them are not in some way of benefit to us as farmers and fruit-growers. The most despised among them, the crow and the blackbird and even the English sparrow have some good points. Hawks and owls destroy great quantities of field insects, mice, etc., which do mischief to our crops. It is said that the few chickens which fall victims to their depredations are slight compensation for the good they do in destroying harmful vermin in the fields. All are our friends in some way and oft are their labors appreciated.

I hope everyone will try to protect the birds against the enemies which seek their extinction, for the slaughter is certainly great all around us. Laws there are to protect the birds, (song birds at all times of the year), yet how frequently city sportsmen (?) with dogs and guns, out for a day's hunt, are known to shoot at anything and everything which comes within range regardless of law or remonstrance.

I hope, too, that the traffic in dead birds will not be encouraged by any of our readers wearing such upon their hats or bonnets. There are plenty of garnitures which do not necessitate the taking of a little life. A dead bird upon your head? No, indeed! If every woman would say this, how many innocent birds might be spared. As it is, in some parts of the country they are being destroyed by millions, simply to satisfy woman's vanity.

Teach the children, too, to befriend the birds. Show them that it is wrong to harm them in any way. Encourage them to study their habits and always to consider them as friends. The lawless destruction of these feathered songsters will certainly result in their extinction. Let each of us constitute ourselves a committee of one to protect them whenever and wherever possible.

"BE NOT UNEQUALLY YOKED."

DEAR SISTER FARMERS AND MEMBERS OF THE HOUSEHOLD:—I have often thought I would like to join your circle by sending a few words of greeting and also to tell you that this department in our home paper is appreciated and enjoyed by me.

I have been moved several times, when the topics under discussion were of a serious nature, to respond, and at this time will do so. The letter from a brother this week is a warning and a sermon in itself to all unmarried Christian women. The "unequally yoked" can never be agreed on moral questions, for there is no concord between sin and righteousness, or between a loyal soldier and a rebel.

When a Christian girl gives her life deliberately into the keeping of an unbeliever, serious trouble always follows. It can-

not be otherwise, for in this decision she has weakened her own power to meet the increased obstacles to live at her best for God. The matter of church-going is one of the duties and pleasures of her life, not simply a habit or custom, but she "waits upon the Lord that her strength may be renewed." It has pleased our Father to reveal himself in the sanctuary through his Word, and in "keeping his commandments there is great reward."

There are such glorious realities and eternal verities in our Christian religion as to make it imperative for us to be in its constant and conscious possession, though we suffer the loss of all things else. Hence, I would not dare to encourage anyone for the sake of temporary quiet or peace to forsake the house of God, except providentially so directed after much prayer. If the believing wife shall "sanctify her husband" it will not be brought about by yielding principles to his wishes, but by loving obedience to the vows of God which are upon her. While skill, tact and good common sense are choice gifts, nothing will help to make the best use of each as to possess the perfect love of Christ. This will give power to judge rightly between inclination and duty, between things temporal and eternal, and give one the courage of her convictions.

MERRILL.

H. E. T.

FLOWER TALK.—No. 4.

TRANSPLANTING.

When the plants in the boxes or other seed-bed have reached a height of two or three inches, and settled mild weather has arrived, transplant them to their blooming quarters. This is a nice job for a beginner, but once you get the true idea of the process, it is no trouble at all.

In moist, cloudy weather transplanting can be done at any hour of the day; and such circumstances are the most favorable possible. Failing of these conditions, transplant just at night. Never pull up the plants you are going to reset, but lift them carefully from the rows in the seed-bed without laying the roots bare. To accomplish this, wet the earth thoroughly where the plants are. An old steel table-knife is the best possible implement for lifting small plants. Cut straight down on four sides at a safe distance from the plant, then carefully lift the block, and if you have used enough water the earth will adhere, and the roots remain undisturbed.

Having previously selected your location, dig the required hole or made it with the point of the trowel if the plants are small, put in the plant carefully, setting it a little lower than it stood in the seed row; then press the soil firmly about the little plant. The first time the sun comes out hot, shade the plant in some way; a cup or bowl will answer, but not a glass or tin thing. Two sticks pushed firmly into the ground at the north side of the plant to support one end of a bit of board leaned over it, makes an excellent shelter. Uncover at night, watering at the same time, and the second morning wait longer to cover. Two or three days of such shading is enough for most plants. Some do not need that. Watch and see!

ARRANGEMENT.

You should know the distinctive habit of growth of every plant you handle, so as to arrange the tallest ones in the central portions of the borders. If you have a poultry fence around your flower plot, the tall growers can be placed near that with excellent effect. The canna, gladiolus, tuberosa, tall annual chrysanthemum, and Joseph's Coat amaranthus, all make fine center pieces, as does also the tall stock-flowered larkspur.

The low-growing plants, such as pansy, nemophila and sweet alyssum, should go next to the curbing of the border. The verbena and petunia have a sprawling habit of growth, requiring much room, but are very nice trained up a fan-shaped trellis or a poultry fence.

The double balsam often reaches a height of two and one-half feet, bushing out until a single plant standing alone must have nothing else within a foot of it all around. The balsam is vastly improved by pruning. Do this while the branches are small, cutting away with a sharp knife the lowest three or four branches, but not cutting too close to the main stalk. Later, cut away two or three more here and there higher up but taking pains to preserve the symmetry of the plant.

The Crown aster grows even taller than the balsam; but its growth being upward it does not demand as much room; and yet it must stand a single plant in a place. The Victoria aster makes an average height of eighteen inches or less, and is the earliest bloomer known to this writer among asters. Sow poppies thinly; then pick out the plants until those left are three inches apart. Larkspur and escholtzia need a little more space between the plants. Phlox Drummondii sow thinly, transplanting the surplus until those left are about three inches apart.

Stocks must stand singly. These plants are male and female, the former bearing a handsome double flower of delicious fragrance; while the latter gives a little homely single flower followed by a long seeded pod. The growth of the stock is upward to a height of about twenty inches, and it requires no great room on the ground. The same is true of the salpiglossis.

The canna and gladiolus are best in groups of three or more. Give the sweet peas deep and early planting; also strong support six feet in height. Cut the flowers freely, and snip off most of the seed pods.

Keep grass and weeds out of the flower garden; and have the walks as clean as the

borders. A spud is an almost indispensable implement for this purpose, and one a woman can easily handle. Draw fresh earth up around the plants once a week and keep the spaces between loose and mellow, watering every other night when rain falls. Use water that has stood the afternoon in the sun. A twenty-five-cent tin watering pot will answer every purpose, using the rose nozzle for sprinkling the foliage, but removing it to wet up the earth about the roots.

IANE L. CHAPIN.

ONE MAN'S IDEA OF CHURCH-GOING.

Since the modern fashion is to give a preacher a thousand-dollar salary at least, and he can't appear before a congregation without a fifty-dollar suit of broadcloth and fine linen, it is entirely out of place for the average poverty-stricken farmer to attend church and pay his share of the expenses.

I had a talk about this matter with an old minister lately, and he said that in his younger days the average minister's salary was only \$200 or \$300. He is a farmer now and sees how it is. In those days farmers' produce was higher than it is now and taxes much lower.

HENRY VOORHEIS.

TRAVERSE CITY.

ANOTHER MAN WRITES.

The subject of church-going is becoming interesting indeed, and is a very serious question, yet one easily solved if we go to the Word, which is the key to the right adjustment of all domestic affairs.

Turning to Hebrews 10: 25, we read: "Not forsaking the assembling of ourselves together as the manner of some is, but exhorting one another." It is easy to see that this is a solemn duty, and no trivial affair will prevent God's children from so doing. Let the wife who feels it her duty to obey her unbelieving husband read these words found in Acts 5: 29: "We ought to obey God rather than men."

In First Cor. 7: 12 to 17, Paul lays down some plain rules in regard to the matter. By reading this you will see it is evident that Paul means to teach, in substance, this: The believing husband or wife who has an unbelieving companion should perform all church duties, and if the unbelieving party is pleased to continue the companionship under these conditions, well and good; if not, then a separation is preferable to relinquishing our obligations to God.

We sum it all up thus: The unbelieving husband who is sensible and loves his wife who is a believer, will not only pleasantly acknowledge her right to attend church, but will often accompany her, and be proud to have a Christian wife. And the same with the unbelieving wife whose husband is a believer. This thing is not all one-sided, for there are believing husbands whose wives are unbelievers.

Now, brother Mackeller, you can attend church without being obliged to listen to a woman preacher who has two or three husbands living. There is but one scriptural ground for divorce, and that is adultery.

JOE.

ANOTHER BROTHER SPEAKS.

EDITOR HOUSEHOLD:—I see that J. B. asks why don't some of the men give a reasonable excuse for not going to church.

There are a number of good reasons why some of us don't go, and as this seems to be all laid to the men, I will take the sisters to do, for they seem to think they are so much better than the men because they go to church.

J. B.'s question makes one think of the parable of the two men that went into the temple to pray. One said, "Lord, I thank Thee that I am not like these other people, that I am so much better than they are"; the other humbled himself and said, "Lord, have mercy on me a sinner."

Another reason is that the religion we see nowadays is meant for Sunday and not for week days. It seems strange that a sister should be so lovable at church and at home should be so much the other way. We see the sisters attend the missionary and Ladies' Aid Society and neglect to keep their own children and husband's clothing properly mended. When J. B. and all other church-goers learn that they are judged by what they do and not by what they say, they will then see why some of us don't go to church.

CALHOUN Co., Mich.

M. J. BRYANT.

HOW EVERY READER OF THIS PAPER CAN MAKE MONEY.

For several months I have noticed advertisements in different religious papers describing an improved Dish Washer. As I had grown so tired of washing the dishes the old way, I sent for information to Dept. Q, 4, of the Iron City Dish Washer Co., Sta. A., Pittsburg, Pa., regarding their Washer. They sent me one and I have found it to do just as they said it would. It washes and dries the dishes in less than one-half of the time it usually takes, and I never have to put my hands in the greasy dish water. My little girl, aged 8 years, thinks it lots of fun to wash the dishes and she can do it as well as myself. Several of my neighbors came in to see it work and they all wanted one. I wrote the company and they allowed me a commission. They also wrote and told me how to become their agent. I am now making \$20 a week and still attend to my housework. The Dish Washer sells everywhere. I show it and that makes the work easy. I understand they still want a few good agents, and anyone desiring to make money easy should write them.

A CONSTANT READER.

NOT ALL THINK ALIKE.

DEAR HOUSEHOLD FRIENDS:—I have been a silent listener to the pro and con of the church-going question but when our editor is censured for her opinion I rise to cast my vote. In my humble opinion a husband who declines going to church with his wife is not always in great fault, for his mind and muscles have had six days of labor and at his home fireside he can have rest. His wife can read her Bible, and perhaps Talmage's sermon, sing a song of rejoicing, enter into her closet and pray to him who rewardeth openly. She can have the approving smile of Our Father as much as if she had gone to church in opposition to her husband's wishes.

"Tis not pleasant to hear the remark 'I guess they don't live very agreeably or he would come with her.' Most men think there is more display than piety in church-going. They think they are as good as church-going people. But from the depth of my heart I pity those who have no love for Christian work.

One sister writes "When you hear the church bell ring take your children and start for church." Some sister that lives four miles away might be late, for it is not every husband that says to his wife, "Your horse and carriage is ready."

I have in my mind one that says in winter, "I am not going to have the horses stand out in the cold," and in spring the work has just begun and they need rest and can't be driven to death, in summer they can't go to be pestered with flies. Men are not all built alike; some might be driven, some coaxed, others neither.

Do the best you can but if you can't do that, do the next best.

"Stay, stay at home my heart and rest
Home keeping hearts are happiest,
For those that wander they know not where
Are full of trouble and anxious care;
To stay at home is best."

M. M.

A COUNTRY BEE IN TOWN.

DEAR HOUSEHOLD:—Here I come again with market basket on arm, to exchange the contents thereof with some of our sisters of larger experience. But I approach the portal somewhat timidly, for my wares differ somewhat from the majority of others, since this particular bee has to content herself with very brief and occasional flights through the clover fields of early time flavor, being for the most part surrounded with high walls, forming numberless habitations for human kind, which they delight to congregate together, calling them a city.

But it is a wild, little country bee just the same, and since it may not abide in rural pastures, still seeks to bring some of their sweetness within the circle of its present scope of life.

However, there need be no essential difference in the plan of that life, wherever it may be lived. Whatever of homely, household cares falls to its lot, it strives to perform heartily as unto the Lord and not unto man, but its highest care and endeavor is to cultivate the things of the higher life, to develop and increase the talents given for our improvement.

This is what so many of us, dear sisters, neglect to do. In the daily round of toil, which often seems mere drudgery, we forget to lift our eyes unto the hills from whence cometh our help, to seek after the mind at leisure from itself, to soothe and sympathize. And I am persuaded that there would be plenty of time for every farmer's wife or daughter to attend to this matter of self-education, no matter how closely the hours of labor press one upon another, if simplicity in the manner of living were studied as it should be. Simplicity in dress, in household management, and most of all, perhaps, along that line wherein the true housewife loves to excel, especially when there is "company." I mean in the culinary and baking department. It displays a sad lack of wisdom to witness a table crowded with rich food, while the brain back of the busy hands that prepared it is starving for the need of proper nourishment.

Last week we were invited to one of the first homes of the city, in point of wealth and culture. Its charming mistress has enjoyed several years of foreign travel and study with her husband, and they are one in their plans and counsel for ways and means by which their less favored fellow-beings may be helped and uplifted by their knowledge and experience.

We met together for conference as the president of one benevolent organization may meet the president of another organization—on the same footing, with mutual usefulness in view. Such a delightful two hours and a half, not the least suggestive part of it being the supper season. Yes, "supper," but with a small s please. There was a lamb stew and fried potatoes; white and brown bread and butter with quince sauce; all delicious, but not a thing more, except cold water, and tea brewed at the table. What country sister, weighed down with work and many cares would not have felt annoyed, to say the least, at having to ask a guest to sit down to such plain fare, without cake or kickshaws of any kind?

But the servants were busy house-cleaning and no apology was needed or expected. There, I am afraid Madame Editor will say my produce is unpalatable, and it surely is not as marketable as the proverbial butter and eggs, so I have a real mind to give you something that tastes good. It is one of the standard edibles that we always

try to keep in the house and the longer it can be kept the more toothsome it becomes. This is nothing more nor less than one of Bee's big, soft, ginger cookies, famed throughout the borders of the land for excellence.

And this is how it is made:
Place in your stirring bowl one cupful of brown sugar, one egg (unbeaten), one teaspoonful of cinnamon, and nutmeg as you like it; two teaspoonfuls ginger, one cupful black molasses, one cupful shortening, half butter and half lard. Do not stir together until you have ready three-quarters of a cupful of hot water, into which dissolve a teaspoonful of soda, and while it fizzes pour over the mixture, stirring in flour at the same time, enough to make a soft dough. Turn half out on the floured board at a time; do not mould, but roll and cut, flopping them over into a saucer of coarse, granulated sugar before putting in pans. Bake in moderately heated oven. The cookies will run together and need a knife passed along the seams before lifting out on paper to cool. If just right, you will have five dozen plump, brownie squares of deliciousness. The main secret of success lies in not working the mass, and keeping flour about it to prevent sticking. In this, as in various other things, practice makes perfect, so do not be disheartened if you fail the first time you try.

Yours, rather gingerly
HARTH F. BEETIC.

[The Household editor tested the above recipe before putting it into print and can vouch for its excellence. We, however, placed the cakes rather far apart upon the baking pans and found no difficulty as to their running together. They are delicious.]

A BIT OF EXPERIENCE.

"He that followeth me shall not walk in darkness," John 8:12. God is able to hold him up that his feet shall not slip. We, as the sheep of His pasture, have a right, after our hearts are cleansed and fixed on Him, to claim what He has promised and delights to give us.

My business, as one whom He hath bought with a price, is to glorify Him in my body and spirit which are His. Our highest aim being to do this, the very center of our being longs to do His will as it is done in Heaven. Then when we are in doubt as to the wisest course to pursue, and like Solomon, "know not how to go out, or come in," will He withhold the good thing from us? Our names are graven on the palms of His hands. Look up, see the precious marks of our kinship! See the Mighty Counselor, The Prince of Peace!

He who notes the sparrow's fall, looketh on the hearts of our stay-at-home husbands, and sees all the conditions. Let none sit in the shadow of doubt, for the good tidings are to whosoever is needy of anything to enable them to glorify Him. When we ask for bread, He will not give us a stone.

NOT GOING, OR STAYING, BUT LOVING AND OBEYING.

I know a woman well who has two children and a husband who stays at home from church. She does all in her power for their welfare seven days in the week. Some time before the hour, she tells him pleasantly, "I wish to go to church," at such a time. She prays earnestly for the Holy Spirit to lead the way, whatsoever the will may be. Sometimes her husband is willing, sometimes he storms; but, being free from condemnation, her soul is full of peace, and she goes, trusting Jesus, because His will is "sweeter than honey in the honeycomb." And when there is a duty at home, the Comforter abides, and makes her a sunbeam just as well as if she went to church. It is not going, or staying, but loving and obeying.

The Lord is graciously using this woman in more ways than one, and day by day her inner life grows richer in grace and knowledge of the Truth.

To all who doubt His willingness to guide us in all our ways, I repeat the old invitation, sweet with blessings through all the ages gone, "Come and see." E. C. Y.

GRAND LEDGE.

PUTTING UP STRAWBERRIES.

STRAWBERRY JAM.

The strawberries must be very ripe, and to each pound of berries allow one pound of granulated sugar. Sprinkle the sugar over the berries, cover them and let them stand all night. Next day, boil them very slowly till the berries and sugar form a thick, smooth mass. Put up in small jars, and cover closely with thick paper.

STRAWBERRY PRESERVE.

To each pound of strawberries allow one pound of powdered loaf sugar. Pick over the fruit carefully, and lay aside the largest and firmest berries. Mash the remainder, or put on to boil for fifteen minutes, then squeeze them through a very thin cloth; put this juice on to boil with the sugar, remove the scum, then put in the whole berries; let them boil very slowly for half an hour, skim out the berries and put them into jars, filling nearly full. Boil the syrup down quite thick and fill up the jars. Let them stand until cold, then put over the fire and let them come to a boil; dip the berries out and put back in jars, pour the hot syrup over them and seal quickly.

STRAWBERRY JELLY.

The berries must be very ripe. After being well picked, put them into a close

stone jar and set it in a kettle of boiling water. As soon as the berries begin to break, take them out and strain them through a jelly-bag. To each pint of juice allow one pound of loaf sugar; break it small, and put it into a porcelain preserving kettle with barely sufficient water to melt it. Stir up the sugar while it is dissolving, and when all is melted, put it over a brisk fire and boil and skim it till clear and thick. Now put in the berry juice and boil it fast for fifteen minutes. Then put it warm into tumblers and when it is cold cover it with double white tissue paper. For the outer covering use thick paper. Keep in cool, dry place.

ENGLISH STRAWBERRY PIE.

Make a rich pie paste and line the sides of a deep dish with it. Cover the bottom of the dish with sugar, and lay in the strawberries whole; sprinkle sugar over the top and bake in a moderate oven. Serve either hot or cold, with cream.

STRAWBERRY CUSTARD.

Take three gills of strawberry juice and dissolve in it one pound of white sugar, mix it with one pint of boiling sweet cream, stir until quite thick, pour into custard glasses and set aside to cool. Do not serve until very cold.

CLARA MERWIN.

THE END OF THE CHURCH-GOING DISCUSSION.

With this issue we must close the discussion in regard to church-going. All have had an opportunity to give their opinion, and every letter to which the writer's name was attached, has been published, at least in part.

Now that the busy season is at hand, do not entirely drop out of the Household, but remember that we need your counsel and advice more than ever. If you are in possession of any facts which will lighten the labor of the housekeeper in any direction, please take time to jot it down and send it to the editor for the benefit of others. —Ed.]

SEVERAL communications intended for publication in the Household, but which lacked signatures other than initials, have been received and consigned to the waste basket. This department is not a medium for those who are unwilling to have their identity known, at least to the editor.

AN INCIDENT AT THE CITY HOSPITAL.

A Woman's Life Barely Saved by a Critical Operation—Her Health Destroyed.

There was a hurry call for the ambulance of the City Hospital. In the course of an hour a very sick young woman was brought in on a stretcher. She was pale as death and evidently suffering keen agony. There was a hasty examination and a consultation. In less than a quarter of an hour the poor creature was on the operating table to undergo the operation called ovariectomy.

There was no time for the usual preparation. Her left ovary was on the point of bursting; when it was removed, it literally disintegrated. If it had burst before removal, she would have died almost instantly! That young woman had had warnings enough in the terrible pains, the burning sensation, the swelling low down on her left side. No one advised her, so she suffered tortures and nearly lost her life. I wish I had met her months before, so I could have told her of the virtues of Lydia E. Pinkham's Vegetable Compound. As it is now, she is a wreck of a woman.

Oh, my sisters, if you will not tell a doctor your troubles, do tell them to a woman who stands ever ready to relieve you! Write to Mrs. Pinkham at Lynn, Mass., confide freely to her all your troubles, and she will advise you free of charge; and if you have any of the above symptoms take the advice of Miss Agnes Tracy, who speaks from experience and says:

"For three years I had suffered with inflammation of the left ovary, which caused dreadful pains. I was so badly affected that I had to sleep with pillows under my side, and then the pain was so great it was impossible to rest. Every month I was in bed for two or three days. I took seven bottles of Lydia E. Pinkham's Vegetable Compound, and am entirely cured. I think there is no medicine to be compared with the Compound for female diseases. Every woman who suffers from any form of female weakness should try it at once." Miss AGNES TRACY, Box 432, Valley City, N. D.

Who opened that bottle of **HIRES Rootbeer**?

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HIRES Rootbeer

Is composed of the very ingredients the system requires. Aiding the digestion, soothing the nerves, purifying the blood. A temperance drink for temperance people.

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Just go among your friends and sell 10 lbs. of Baker's Teas, Spices or Baking Powder and earn a Splendid High-Grade Camera; or you can sell a total of 50 lbs. for a Gold Watch (Waltham or Elgin) and a Chain; 75 lbs. for a Boys' Bicycle; 100 lbs. for a Girls' Bicycle; 100 lbs. for a High-Grade Bicycle; 25 lbs. for a Solid Silver Watch and Chain; 10 lbs. for a Solid Gold Ring; 25 lbs. for an Autoharp; 15 lbs. for a pair of Lace Curtains.

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W. G. BAKER (Dept. 19), SPRINGFIELD, MASS.

MOTHERS Your Children cured or Bled wetting. Sample free. Dr. F. E. MAY, Bloomington, Ill.

ONLY \$18. Now is the time to buy a MICHIGAN FARMER Sewing Machine, with all the latest attachments. Warranted for 10 years. Hundreds in use. Cheapest and Best. Address orders to MICHIGAN FARMER, Detroit, Mich.

previous week; and shipments were 13,330 as compared with 17,820 for the same day the previous week. Values on hogs show a general decline since a week ago, and the range is now the lowest for some months. Receipts are not heavy, but the steady decline in prices at the west is affecting the market. The close on Wednesday showed a fairly steady market, with some stock carried over. Quotations at close on Wednesday were as follows: Good to choice light medium yorkers, 160 to 180 lbs., \$3.90; good to choice pigs and light yorkers, 135 to 150 lbs., \$3.90; mixed packing grades, 185 to 200 lbs., \$3.85; fair to best medium weights, 210 to 250 lbs., \$3.95; good to prime heavy hogs of 270 to 300 lbs., quotable, \$3.85; rough, common to good, \$3.15; stags, rough to good, \$2.25; pigs light, 100 to 120 lbs., good to prime corn fed lots, \$3.90; pigs, common, thin skippy to fair quality, \$3.25; \$3.50.

CHICAGO.

UNION STOCK YARDS, May 20, 1897.

CATTLE.—The receipts for last week were 44,807 against 39,985 for the previous week, and 43,310 for the corresponding week in 1896. Up to and including Wednesday of this week the receipts have been 35,846, as compared with 32,238 for the same days last week, an increase of about 3,600 head. As compared with a week ago prices show little change, but whatever changes have occurred are in the direction of a decline. Good weight second-quality steers show the greatest difference, and are \$2.10 lower; but extra steers, smooth, fine boned, and well finished, are as high as a week ago. Such steers sold at a range of \$5.65 to \$5.80 on Wednesday, the latter an extreme price; choice steers, not so well finished, brought \$4.70 to \$4.95; good butchers' steers, \$4.20 to \$4.45; common to fair steers, \$3.75 to \$4.10; common to choice heifers, \$3.25 to \$4.15; common to choice cows, \$2.75 to \$3.45; Texas steers, \$3.25 to \$4.45; Texas cows, \$2.75 to \$3.20. The market closed steady on Wednesday, with all good cattle disposed of. On Thursday receipts were 10,500; market steady, with the range of values the same as on Wednesday.

SHEEP AND LAMBS.—Receipts for the past week were 60,804 as compared with 73,490 the previous week, and 72,885 for the corresponding week in 1896. Up to and including Wednesday of this week the receipts have been 39,380, as compared with 37,627 for the same days last week, an increase of 2,000 head. Since the opening of the week the market has held fairly active and steady, and the supply not any too large. On Wednesday clipped sheep sold at a range of \$4.40 to \$4.90; and clipped lambs at \$4.40 to \$4.85; a few native lambs in fleece sold at \$5.00 to \$5.30, and top Colorado at \$5.60. Large sales of clipped Texas sheep were made at \$3.50 to \$3.60 for common and \$3.90 for tops. Receipts Thursday were 13,000; good stock steady and fairly active; common rather slow but unchanged.

HOGS.—The receipts for last week were 162,486 against 149,393 for the previous week, and 147,772 for the corresponding week in 1896. Up to and including Wednesday of this week, receipts have been 90,310, as compared with 89,738 for the same days last week, showing an increase of about 1,000 head. The hog market shows weakness, but on Wednesday was a little stronger than on Tuesday, and all offered were taken and the pens pretty well cleared. Rough and common sold at \$3.40 to \$3.60; prime packers and good mixed, \$3.65 to \$3.75; prime medium and butcher weights, \$3.70 to \$3.75; prime light, \$3.75 to \$3.75. The bulk of the receipts were medium and heavy packing, ranging from 235 to 450 lbs. Some of the extra heavy sold down to \$3.35 per cwt. Thursday receipts were 24,000; market active and strong; light, \$3.60 to \$3.75; mixed, \$3.60 to \$3.75; heavy, \$3.35 to \$3.75; rough, \$3.35 to \$3.50.

IMPORTATIONS OF WOOL.

The record of importation of raw wool at New York, Boston and Philadelphia during April was 95,629,294 pounds. This is equal to half or nearly half the importations for an entire year under normal conditions. The importations of the calendar year 1895 were 248,989,217 pounds, and for the calendar year 1896, 159,776,015 pounds.

April beats the record in regard to importations of wool, but the figures for February and March add enormously to the total advance importations, and May is likely to pile another 80,000,000 pounds or more upon the existing stocks in the United States. The total importations for February last were 31,650,782 pounds, and in March 58,085,939 pounds. The total for these three months is 185,000,000 pounds, which is more than the entire importation of 1896, and more than three-quarters of the importation of 1895. The importations during April included 70,833,265 pounds of wool of class 1, of which 50,978,476 pounds came into Boston, 15,271,603 pounds at New York and 4,633,186 pounds at Philadelphia.

The wool of class 2 was only 5,342,161 pounds, while class 3 wools arrived to the amount of 19,403,968 pounds, of which 6,391,743 pounds were entered at Boston, 9,612,394 pounds at New York and 3,399,731 pounds at Philadelphia. If the month of May should show importations equal to those of April, the figures for four months would equal the supply for a year, and similar imports in June and July would pile up a supply for two years.

A WRITER in Vick's magazine says: "Don't swallow the grape-seeds, for they may get into your vermiform appendix, and death or at least the surgeon's knife follow." How many times that warning has been sounded in recent years. We have no doubt whatever that it has lessened the use of one of the healthiest fruits under the sun, because few grape eaters, and especially children, will spew out the seeds even at the risk of appendicitis. So they mustn't have grapes. Perhaps even less grape-vines have been planted as a result of the scare, for scarce it is and nothing else. In thousands of operations which have taken place, to remove the diseased appendix in the human subject, some of them successful, many of them too late—there is not one authenticated case of any grape or other seed or any foreign body being found in the organ. The reason is obvious, for the interior of the appendix is big enough to admit only a medium sized darning needle. It is time therefore that the public knows the fact that danger from grape-seeds is absolutely groundless. Let us not give up planting and urging others to plant the vines, fearing the race's extinction because of grape-seeds in the

appendix. Swallow the seeds if you like, and let the children swallow them. To most persons grapes are not grapes when the pulp is freed from seed.

SACALINE.

To the Editor of the Michigan Farmer.

Where can a man find the seeds of the new wonderful forage plant, sacaline? I have heard that it will thrive where no other forage plant will grow, so I should like to make a trial of it. I hope that the MICHIGAN FARMER will be able to tell me where I can get the seed.

MONTICALLY, Mich.

S. M. JOHNSON.

The seed of sacaline can be procured of any of the large seed firms. Before ordering it, however, read what Prof. A. A. Cruzler, of the Agricultural College, says about it in a bulletin just issued:

While we do not consider this forage plant of any value for the people of this State, a brief report upon it may be of interest. Our plants were started by sowing the seed in the greenhouse, March 20, 1895. In May, after the ground had become warm, fifty plants were transferred to the open ground, into good rich loamy soil, and set four feet apart each way. They were shaded for a few days and given good care through the season and made a thrifty growth, sending up half a dozen or more stems about three feet high from each root. Several of the plants produced blossoms. The next year, 1896, the growth was larger, forming a thicket three and a half to four feet high. Some of the stems measured fully eight feet in total length. A few suckers were produced from underground shoots at a distance from the main plant but such cases were not numerous. All the plants blossomed profusely this year about the last of August, some being earlier than others. About half the number produced seeds in abundance, the remainder bearing staminate flowers only and producing no seeds. A portion of the seeds became ripe enough to grow, but half or more were still too green for germination when the plants were killed by frost on September 23. A limited test was made of the feeding qualities of the plant. Young leaves and shoots were offered to cattle, sheep and horses, which ate them readily. Some of the objections to sacaline as a practical crop to grow are:

1. It is more troublesome to start than other fodder crops.
2. It will remain as a weed when the ground is wanted for something else.
3. It cannot be cured and handled as hay.
4. The stems quickly become woody and unfit for feed.
5. The yield is no greater than that of corn and other crops more easy to manage.

BRITISH FOOD SUPPLY IN WAR TIMES.

A correspondent of the London *Economist* writes as follows to that journal on the question of the food supply of Great Britain in a time of war. "In your article on the above subject, in your issue of April 10, you say: 'As long as we command the sea we may as safely eat Russian or American wheat as that of our own plowlands.' Does not this assume as a certainty that we shall never again be at war with Russia and America? If we are not at war with both our chief sources of life we may pull through. If we are at war with both it is certain they will not sell us food when they know our want of it will fight more for them than anything they can do to our fleet. If they will not sell it, it is impossible to hope to replace it in time to prevent famine on a tremendous scale in these islands. Such stupendous supplies of wheat and other grain as we get from North America and Russia never exist anywhere else on the face of the globe. In addition, the supplies we get from Turkey, Roumania and Persia could not come without Russia's consent. The supplies we get from Argentina (where the crop is nearly a failure this year) India, Australia, etc., are all they can send in peace time, and would be difficult to send even that small extra amount in war time. Canada would want the small surplus she now sends us if fighting her great neighbor. Although we had full command of the sea in 1800 and 1801, the average price of wheat was £5 16s. 8d. per quarter for those years, though we grew it nearly all at home and had only about 14,000,000, instead of about 40,000,000 to feed. If these facts are true surely the *Economist* might help, not in supporting any proposed remedy, but by admitting that the subject is of such vital importance as to call for the appointment of a royal commission, to be composed of naval, military and corn-trade experts, to consider the question.

DEPEW AND THE SCOTCHMAN.—Scotchmen do not like to be reminded of the saying that it requires a surgical operation to make them see a joke, and as a matter of fact, they are as susceptible to the influence of most good stories as anybody else. Dr. Depew, however, seems hardly to believe this, though he has many warm friends among Scotchmen, including Ian MacLaren himself. Once at a Scotch dinner the doctor said that if the jokes uttered by him that evening were not instantly appreciated, they surely would be by the time the next annual dinner was held.

"I don't think that's a very funny thing to say," was the growling comment of a handsome old Scot sitting near by. "Oh," said Depew, "that's all right. You'll see the fun of it a year from now."

AMERICAN BICYCLES IN FOREIGN MARKETS.

The following interesting article on the export of American bicycles is taken from the London *Pall Mall Gazette*:

"We have already referred in these columns to the marvelous growth of the American cycle trade, and especially to the export side of it. We have now been favored by the chief of the Bureau of Statistics at Washington with details of the shipments and the various destinations of the cycles sent abroad during the last fiscal year, namely, that which ended on June 30, last. Their total value was \$1,898,012, distributed as follows: Six hundred and thirteen thousand two hundred and ninety-two dollars in shipments to the United Kingdom, \$492,685 to Canada, \$145,892 to Germany, \$108,414 to France, \$84,610 to Australia and New Zealand, \$66,867 to the Netherlands, \$49,621 to Italy, \$34,856 to Denmark, \$23,843 to Norway and Sweden, \$23,127 to Belgium, \$70,593 to the different countries of Central America, \$30,320 to the Sandwich Islands, \$27,056 to Japan, \$23,979 to the West Indies, and \$7,402 to British Africa. Other countries near and far took American machines in smaller quantities. It would be difficult to name a land in which civilized men exist that is not mentioned in the list before us. The values are in no case very large, and the total is little more than one-fifth of Great Britain's; but it must be remembered that the American export trade in this commodity was virtually inaugurated during the second half of the year under consideration, for in the first half the value of the shipments did not exceed \$243,700. The details we have given seem to us to show that American manufacturers contrived in a very short time to spread their arms over the world to some purpose, and that their grip will probably tell against the British maker in the near future with much rigor."

THE RAZOR-BACK HOG.

Among the many odes, apostrophes and biographies written of the razor-back hog the Cottonwood Falls (Kas.) *Leader* gets out a good one: "The razor-back is a breed of hogs raised in the South before the war and still to be found in some localities. He is built on the Swiss-cottage style of architecture. His ears lay back with a devil-may-care air. His tail has no curl, but hangs limp as a dish-rag. He ignores the slow, stately walk of the Berkshire and goes in a lively 2:10 trot. He always travels as if he were trying to catch a train which had just whistled for the station and he had a quarter of a mile to go. The thoroughbred razor-back prowls around the woods, living on acorns, nuts and roots, and, if necessary, can climb a tree like a monkey. Occasionally he crowds under a gate and assists in harvesting his owner's corn crop, and if he has any time to spare from his owner's crop he will turn in and assist his neighbor, often working at night rather than see the crop spoil for want of attention. He never knew the luxury of a sty. He wouldn't get fat if he could and is only fit to kill on the day of eternity. Crossing the razor-back with the blue-blood stock makes no improvement. The only successful way is to cross him with a locomotive going thirty miles an hour. He then becomes an imported thoroughbred and the railroad company pays for him at the rate of fifty cents a pound. The ham of a razor-back is almost as juicy as the ham of an iron fire-dog, but not quite as good eating as sassafras bark."

"The fact that I was a good musician," said the lady from Johnston, "was the means of saving my life during the flood in our town a few years ago." "How was that?" asked the young lady who sang. "When the water struck our house my husband got on the folding bed, and floated down the stream until he was rescued." "And what did you do?" "Well, I accompanied him upon the piano."—*New York Journal*.

THERE are over four hundred American students now in German universities.

A YOUNG Scotchman was once halting between two loves; one was possessed of beauty and other accomplishments, while the other was very plain, but she had a cow for her fortune. In despair of arriving at a decision, he applied to a canny countryman, who delivered himself thus: "Marry the lass that has the cow, for there's no' the difference o' a coo's value in any twa weemen in Christendom."

In view of the increase in the tariff on cattle, large numbers of Mexican cattle are being rushed in. Last month 72,644 head were imported, the greatest in the history of the cattle trade with Mexico. In April last year only 14,905 were imported.

THE duties collected on imported goods in April amounted to \$24,454,321. It was the record-breaking month for importations. Twice before has the amount of duty collected in one month exceeded this, but duties and prices were higher.

Grand Ledge Sunday Excursion May 30.

Delightful places for an afternoon's visit. Tell your friends about its beauties (of nature) and get them to go with you on the D. G. R. & W. (D. L. & N.) train which will leave Detroit at 8:30 A. M. on above date. Six and one-half hours at Grand Ledge and the 7 Islands resort. Costs \$1 for a ticket. No charge for bicycles or baby cabs.

GEO. DEHAVEN, G. P. A.

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Horticultural.

For the Michigan Farmer.

ASPARAGUS.

It is remarkable how few people raise asparagus, while it is so easily raised. Why, it almost raises itself. It requires only a small bed, or better still, a short row.

Make the place very rich the previous year by manuring heavily and growing some kind of a hoed crop on it. Manure again the next spring and plow deep, and fit well.

Procure about fifty plants and set them out in a row about a foot apart. This will make a row fifty feet long, which will be plenty for an ordinary family until peas get ready for use. (Cook them as you would peas.)

Keep well cultivated, and don't use for two years after planting. This will give a well established root, and will last a lifetime without any more trouble, provided it is kept clean from grass and weeds, and mulched deep each fall with good manure, which should be raked off as early in the spring as can be, so the ground will warm up and start your "grass" early. If your ground is good and properly attended, you will, by fall, have a row of dark green tops four feet high and as thick as a hedge.

Plants should be a year old when set out. You can raise your own plants by getting a five-cent package of seeds and sowing early in the spring and keeping clean. The next spring they will do to set out.

You can put salt on asparagus in sufficient quantities to kill all other vegetation and the asparagus will do the better for it. Salt should be liberally sprinkled on the row each spring. When cutting for use don't let it get more than four or five inches high, and then cut it off close to the ground. It will grow from an inch to two inches a day. I heard one institute worker say that it would grow an inch and a half an hour, but this is too fast.

Be sure to plant it in some place where it can remain permanent, for once established it will always be with you. It will be well to have it handy to the manure pile, so you, at any time it needs it, can wheel out some manure and put on.

Pieplant may be planted in the same row at one end, and treated the same as to care.

GRATIOT Co., Mich.

PLANTING AND CARING FOR NURSERY STOCK.

Caring for trees rightly commences when they are planted, or even before. Paste these five points in your hat:

1. After you have dug the hole for planting do not under any circumstances fill the hole half full of fermented manure. It will result in very damaging effects.
2. Do not put off pruning your trees for even 24 hours after planting, or you will surely lose a certain per cent of stock when it starts to grow.
3. Trees cannot survive more than a couple of years with wet feet. This important fact should be looked after.
4. Do not use a young orchard wherein to pasture cattle, for you can easily imagine the results.
5. A very important point in getting a young orchard to thrive is to keep it under cultivation for several years before sowing down to grass, and then clover, if anything.

If these five points are held in view a great deal of the failure in starting and growing fruit may be overcome. Mulching during a very dry season is very beneficial, although my trees received no mulching of foreign matter. I had the ground planted in potatoes and my trees were hoed the same as a hill of potatoes near it. I have great faith in mulching with dry, loose dirt, often cultivated during the dry season.

Now that the trees are planted and started in growth, we will consider the agent which will produce the most rapid growth—barnyard manure, well rotted. Do not pile this up in a heap around the tree. If you have a sufficient amount, spread it evenly over the whole surface. If not, scatter it around the tree, working it in well with a hoe. Your trees will rapidly respond to this factor. Another important agent of fertility which is too often wasted about the farm is wood ashes. Your trees need it. If your good wife carries out the ashes, relieve her of that job. Carry them out yourself, and empty them around your fruit trees. A better way is to place a barrel handy, and some day when the ground is frozen and covered with a "skiff" of snow, haul the barrel on a small sled through your orchard and leave a few shovelfuls of ashes with every tree. Grapes, plums, peaches and small fruits, such as currants, gooseberries and strawberries, respond readily to ashes used as fertilizer.

You can hardly apply too much ashes to a fruit plant if the application is made properly. Ashes will stay in the ground a long time before its strength of fertility is all spent, and if applied in the surroundings of a plant the rootlets will avail themselves of its strength for a number of years. We heard a man say "ashes killed a tree for me," but upon investigation found that it was planted in an old leached ash pile. Our farmers are not careful enough in the saving of their ashes. The first enemy we must look for after setting out our young trees, and especially of the peach, is the borer. More damage results from this enemy than any other in our peach orchards.

There are several methods of going after the borer. The one I have found most successful is to dig around the tree near the ground and with a sharp, small wire, hook them out and kill them. Another method which has been recommended to me for peach trees, is as follows: Dig a small, hole, saucer-shaped, around the tree, and pour in half a gallon of boiling hot water. This, it is said, will kill the pest and not damage the tree. I have not tried this method, but as I expect to have some borers to fight this season I shall surely do so.

HANCOCK Co., O.

For the Michigan Farmer.

THOSE TOMATO PLANTS.

It is a common thing to see in many farm houses at this season of the year, a box or two of tomato plants sitting in some sunny place. This fact of itself is nothing remarkable and is commendable in everyone who has such a "flower pot," but there are other facts connected with this one, about which I wish to comment. Very few of those who so plant seeds, ever think of transplanting the plants more than once, and that once is from the box directly to the garden.

Many are aware that frequent transplantings make earlier fruit as well as stockier and healthier plants. Seeds are apt to be sowed too thick in boxes and, if good, the plants will be too close together. If these are not transplanted so as to allow more space for each plant, they will grow up sickly and slender.

My plan has been to transplant to larger boxes as soon as the third leaf is well formed. I set the plants nearly to the seed leaf that the stems may be short and stocky; when they are about three inches high, I again transplant into berry boxes, planting four in a box, one in each quarter; when the weather and soil are suitable I finally remove to the garden.

In setting out, I break the boxes apart and with a sharp knife cut the earth into four equal parts so that a plant will be in each piece; this leaves the roots of each plant undisturbed and they will continue growth unchecked.

As the tomato plant is a gross feeder, plenty of well rotted manure should be placed below each hill; the plant should not be set directly in the manure, but there should be six or eight inches of earth between.

There are several ways of training the vines; any way is good enough, only so that the fruit is off the ground and has plenty of sunlight.

KALAMAZOO Co., Mich.

B. A. WOOD.

RUSSIAN FRUITS.

B. O. Curtis, of Illinois, make the following report on Russian cherries and plums in a letter to Prof. J. L. Budd, and published by him in reply to criticisms on their value and his belief in their value to the fruit-growers of the northwestern states from their hardiness:

The Russian cherries with me are a great success. In 1895 the severe freeze on the 14th of May killed all my cherries, except on the English Morello and the Cerise de Osthelm. In 1896 the cherry crop was good. All the Russian varieties were loaded with fruit. Cerise de Osthelm again produced a heavy crop of delicious fruit. This is very late and equal to English Morello in productiveness, and superior to it in hardiness and quality.

I prize the Russian cherries for their hardiness of tree, quality of fruit and for early and profuse bearing. I have had them for ten years and have not lost a tree from transplanting or any other cause.

Early Morello (Orel No. 23) ripened the 23d of May last season. The trees were full, the fruit large and of very good quality. This is the earliest I have known any variety of cherry to ripen. Its size and keeping after ripe are worthy of special notice.

The Russian plums have come to stay. I have been planting them now for ten years and have not lost a tree and have not seen the least damage on them, except one tree of Maruraka, with stem five feet high, which is unscaled on the south side. Another tree of same variety, with a low stem, is perfect. Both of these bore a full crop in 1896 of large, nice blue plums of the best quality and most beautiful appearance. It was a sight to see the fruit as it hung on the trees. It matured perfectly and is one-third larger than the Communia. Dame Aubert Blue is the largest of all plums I have grown or seen. Many of the specimens measured two and one-fourth inches in diameter. Color, dark blue; flesh firm, juicy, rich and delicious. It is equal to the best English varieties, and the tree is a perfect ironclad. In the May freeze, in 1895, the ground froze half an inch deep. This killed all the leaves and young shoots on the Lombard, while the leaves of the Communia and the Russian plums were not damaged in the least. This proves the Communia to be of Russian origin. The leaves of the English plum were all scorched by that freeze, but not a leaf of any Russian was changed in color. The trees seem as hardy as any forest tree.

The Long Blue, Lelaps, Hungarian and White Nicholas produced plentiful crops the past season.

The Russian plums I have are all hardy, productive and superior in quality. The English plums are tender in tree and will be winter-killed when it is cold enough to kill peach trees.

Would it not be worth while testing

these fruits in the Upper Peninsula? It strikes us they would prove a valuable addition to the list suitable for that section. But perhaps some of the farmers there have already made tests of them, and can form an opinion of how they will answer. If so, we should be pleased to hear from them so as to spread the information they have gathered regarding these fruits.

For the Michigan Farmer.

FOR ALL KINDS OF WEATHER.

It's a good maxim, "Not to put all your eggs in one basket," neither should one occupy all their space with one thing but have a weather eye out for all changes. Droughts are on hand, and some gardens look as if burnt over. Now a large rollicking bed of petunias will bloom away, and wink at the sun in defiance. Portulaca will flourish, and the more sun the more zinnias. As lovely, and as useful as are sweet peas, they are rather notional, like best a wire screen from north to south, and plenty of water so lots of rain suits them, as well as gladioli, cannas, lilies, and roses. It is back-breaking work to run up and down stairs, lugging a heavy water sprinkler up and down, so last year I bought ten feet of rubber pipe, fastened one end to the faucet in the kitchen sink, put the other out of a window near, and let the water run into a big tub beneath; then I could dip it out as needed. We must not let our gardens go up in sun and glory together and have nothing to show by the last of August, but consider the cool nights. Marigolds and zinnias will hold up their heads until late October, and I have picked a sprig of curled parsley from under a light snow. We must consider the weather when we arrange for the plant shelf. I have protected my plants very well, with plenty of newspapers wrapped around, but there will come fifteen below zero, when Jack Frost claims every green thing in sight. Then bulbs come to the front. I have even had the soil frozen lightly in the pots holding narcissuses and hyacinths, and the little dears have braved it through and blossomed all right, so prepare for an especially cold night when you are planning for the window plants and get, at least, a few bulbs. There are some things you ought to provide in the way of dress for all sorts of weather, a light broad-brimmed straw hat, that ties securely under the chin, stout shoes that lace well around the ankle, and above all things, a shortened dress. This stepping and being twisted up in long skirts, and perhaps tumbling head over heels because of it, is unworthy of an earnest flower grower.

ANNA LYMAN.

SECOND-CROP STRAWBERRIES.

Strawberry growers have frequently given their method of securing a second crop of strawberries, and a correspondent of *American Gardening* describes a method which he has seen successfully followed by a gardener in Delaware County, N. Y. It is as follows:

A gardener living near me has, in favorable seasons, grown a second crop of strawberries from his plants. He gets only a few bushels on an acre in September and October, but he obtains a large price for them—I think about \$1 per quart. I became interested, and, after trying some experiments on small plants, I am satisfied that there is something in it for some gardeners.

The method of growing this second crop of strawberries, which experiments have shown to give good results, is as follows: Immediately after the first crop is picked—perhaps it is not best to wait until the last blossoms have ripened fruit—mow the plants as close to the ground as possible. It is very important to mow them so close that there are but few little green stems or weeds left. On large beds a mowing machine may be used, while on small ones the work can best be done with a lawn mower.


After the leaves have become dry burn over the bed. In order to do this it may be sometimes necessary to spread straw or other dry material over it. After it is well burned over give it a dressing of well-rotted manure, spreading it evenly on the bed one or two inches deep to retain moisture. As soon as mulched the bed should be irrigated and kept wet through July, August and September and the weeds kept down.

The new foliage will soon start and make a very rapid growth. New fruit stems and blossoms will appear, which, if not injured by frost, will ripen fruit. I hardly think the plan will do in localities where hard frosts come before the last of October. Small beds can be protected with glass or plant bed cloth.

All varieties of strawberries are not adapted to producing a second crop. Some of the best results have been obtained with the Enhance and Crawford.

Probably someone will ask: Will not two crops of strawberries in one year exhaust the plants so much that they cannot bear a full crop the second year? I think this will depend upon how well you feed them, how much water and fertilizers you apply to the bed, and in some places it may be more profitable to grow the two crops in one year than in two years. It occurs to me that there are possibilities connected with this plan in greenhouse culture. In localities where the season is too short to ripen a second crop before the time for frosts the plants could be taken up in sods and drawn to the greenhouse and planted under the glass, where the heat and moisture could be given them necessarily to fully ripen all the fruit.

Most people who have had experience in




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growing strawberries have found blossoms on their plants in the fall. Has it ever occurred to them that by giving special culture a second crop of ripe berries could be obtained? I only offer this as a suggestion.

TRANSPLANTING FOREST TREES.

When a farmer wants some forest trees to plant by the roadside or around his house he is more apt to go to the forests and select tall, straight specimens, usually pulling them up with only such roots as will come with the tree out of the loose leaf mould soil in which they are grown. Quite often trees thus taken from their native soil are planted just as they come from the forest. Owing to their crowded condition there is but little top growth, though that little is far too much for the mutilated roots to sustain. Usually in late years tree planters cut off all the small branches, sometimes merely by sawing or chopping the trunk just below the lowest branch, leaving nothing apparently but a bare pole. But though these poles look not very promising, dormant buds start out near the top as the roots get hold on the soil. From these, shoots start, which in two or three years grow to a bushy and really handsome top. On the other hand, the treetops left unpruned are usually half dead the same year, and this dead part interferes with making a handsome or thrifty tree until it is removed.

It is a mistake to prune these forest seedlings down to bare poles. Leave on three or four of the lower limbs one bud on each, and have them occupy each side of the trunk as much as possible. These will be ready to start as soon as the roots begin to take hold of the soil and supply moisture. The buds are formed, while if left to be developed from the trunk they are at first only the germs of buds, and need time and a supply of sap to be developed into buds. When buds are started this way too many are formed. This makes a close, bushy head, often looking about the size of a bushel basket the second year. Where buds are left all the growth will be concentrated in these, making something like branches for the future development of a symmetrical head.

But it is almost always poor policy to take seedling forest trees to plant in the open land outside. They are worth much more to grow where they are, while trees from nursery rows that have been duly cultivated are worth much more for roadside planting. Trees from the forests have grown long, straight roots with their feeding fibres at the extreme ends, where they are sure to be broken off in transplanting. The effect of cultivating in the nursery is to cause a great multitude of small roots to start out. These being short may all be saved when the tree is transplanted. If then the tree from the nursery is top pruned to four or five buds they will make the wide, spreading head that is wanted for roadside or ornamental ground planting. The forest tree to be got into such shape will require much more labor than the cost of buying trees from the nursery, aside from the fact that after all has been done that can be to shape the top of the forest tree, that from the nursery will always be much more satisfactory.

House plants are very liable to become infested with green fly and red spider at this season. The heat and dryness of living rooms is favorable to their increase. Syringing with weak tobacco water will rid the plants of the first, and with clear water the last.

INSECTICIDES AND FUNGICIDES.

For the information of those who intend spraying this season, we give below a description of how to make the various solutions used for this purpose:

Bordeaux mixture—Copper sulphate, 4 pounds; lime (fresh), 4 pounds; water, 40 gallons. Suspend the copper sulphate in five gallons of water. This may be done by putting it in a bag of coarse material, and hanging it so as to be covered by the water. Slake the lime in about the same quantity of water. Then mix the two and add the remainder of the 40 gallons of water. Warm water will dissolve the copper sulphate more readily than cold water. If the lime is at all dirty strain the lime solution. If the lime is good the above amount is likely to be sufficient. It is an easy matter to know how much lime is required by using what is termed the ferrocyanide of potassium test. This substance can be got at any drugist's, and very little is required. Take a small bottle (2 oz.) and get it filled with a saturated solution of this compound. If there is not plenty of lime in your mixture, a drop of the test added to it turns brown. Add more lime and stir. As soon as the test fails to color on coming in contact with your mixture, it indicates there is sufficient lime present to neutralize the effects of the copper sulphate. Use wooden vessels in preparing the Bordeaux mixture.

Ammoniacal copper carbonate solution ("Cupram")—Copper carbonate, 1 ounce; ammonia sufficient to dissolve the copper carbonate; water, 10 gallons. This solution is not much used, and is recommended only in cases where the fruit is so far advanced that it would be disfigured by using the Bordeaux mixture.

Paris Green Mixture—Paris green, 1 pound; water, 200 to 300 gallons. Use 200 gallons of water in a mixture for apple trees, 250 for plum trees, and 300 for peach trees. When Paris green is added to Bordeaux mixture, so as to form a combined insecticide and fungicide, add four ounces to every 40 gallons of the Bordeaux mixture.

Hellebore—White hellebore (fresh), 1 ounce; water, 3 gallons.

Pyrethrum—Pyrethrum powder (fresh), 1 ounce; water, 4 gallons.

Kerosene Emulsion—Hard soap, 1/2 pound, or soft soap, 1 quart; boiling water (soft), 1 gallon; coal oil, 2 gallons. After dissolving the soap in the water, add the coal oil and stir well for five to ten minutes. When properly mixed, it will adhere to glass without oiliness. A syringe or pump will aid much in this work. In using, dilute with from 9 to 15 parts of water. Kerosene emulsion may be prepared with sour milk (1 gallon), and coal oil (2 gallons), no soap being required. This will not keep long.

SUGGESTIONS.

When there is danger of disfiguring fruit with the Bordeaux mixture use the ammoniacal copper carbonate solution.

Experience in spraying during the past two years indicates that it is best to use the combined insecticide and fungicide, commencing as soon as the buds begin to swell, again when the leaves appear, and continue it at intervals of 10 to 15 days, until the trees have been sprayed three to five times, which will depend upon the weather. In the case of a rainy season, it may be necessary to spray at least five times, while if dry, and the mixtures have been allowed to remain on the foliage, then three or four times may be sufficient.

In no case spray while the trees are in bloom, but immediately after.

The combined insecticide and fungicide, containing Paris green and Bordeaux mixture, is to be used for insects that chew, and injurious fungi, but kerosene emulsion alone for those insects that suck the juices of plants, such as aphids, thrips, red spider, etc.

A stock solution for the preparation of Bordeaux mixture may be prepared as follows: Dissolve 25 pounds of copper sulphate in 25 gallons of water. One gallon of this contains one pound of the copper sulphate. In another barrel slake 25 pounds of good lime, and add 12 1/2 gallons of water. One gallon of this contains two pounds of lime. To make the mixture, take four gallons of the copper sulphate solution and two of the lime. If there is any doubt about there not being sufficient lime try the test already referred to under Bordeaux mixture. Now fill up the amount to 40 gallons with water.

Prepare the mixtures well, apply them at the proper time, and be as thorough as possible in the work.

HORTICULTURAL NOTES.

J. H. HALE gets ripe peaches two weeks earlier by the following method: In the middle of the growing season, put a strong wire around a large arm of a tree, and twist it fairly tight. This checks the flow of sap and causes fruit buds to form early and in great number. The fruit on the branches of this arm will ripen two weeks earlier than that on the untreated branches, and will be much more highly colored. But this part of the tree will be so weakened by the treatment that it should be cut away after fruiting; the new shoots may come out and take its place. Thus one large arm or limb of a tree may be forced each year.

T. B. TERRY thus describes what he says is the largest and oldest peach tree in the world: We had heard that the oldest and largest peach tree in the world was at Greenfield, Mo., so we started out to find it

when there at an institute. It may surprise you, but we had much trouble in finding anyone who knew of it. I saw the body measured. It was 4 1/4 feet around it at smallest place and 5 feet at the largest point. The limbs each measured about three feet around. The ends of limbs are all broken off now. When in its prime the owner said it spread 80 feet. No one knows how old it is. It had peaches on last season. I wouldn't dare to tell you how many it is said to have produced in a single year. Just think of having, say about 7 peach trees cover an acre with their limbs! I should not have mentioned this if I had not seen the tree.

In answer to inquiries about raising peppermint, how the oil is extracted, and cost of plant, we give the following: We understand that there is a small area in Michigan devoted to the culture of peppermint, though most of the peppermint oil produced in this country comes from Wayne and adjoining counties of New York, where there are about three thousand acres devoted to the cultivation of the peppermint plant, the annual product being not far from fifty thousand pounds of oil—*Western Rural*. The *Rural*, an Illinois publication, should know more about Michigan products than the above extract would show. Michigan produces more peppermint oil than New York, and has for some years. The *Rural's* statements were true ten years ago, but that is a long time in rapid development of industries common in this day of progress. Our contemporary should get a new encyclopedia.

It is conceded that a rose without thorns will smell as sweet as one with them; and surely a gooseberry without spines would be no less grateful. Indeed, the thorns of the gooseberry form one of its objectionable features. The new race of spineless gooseberries marks a new era in fruit-garden culture. To an American especially, who firmly believes that time is money, it is profit to have the time spent on avoiding spines spent on gathering the fruit. *Mechanics Monthly*. But is it not true that plants of any kind which differ radically from the family to which they belong, such as thornless blackberries, white blackberries, or other freaks or sports, are usually deficient in vigor, and prove worthless when cultivated? An albino in the human family is not usually a person of much force of character. Freaks are all right in side shows as curiosities, but not at all useful in everyday life.

J. D. LYMAN, of New Hampshire, writing upon the subject of forestry, says some good things in a letter to the *American Cultivator*: When our people learn to grow timber trees as a crop as well as they now know how to grow corn and other farm crops, then these theorists who are up in the balloons of their imaginations, regulating the rainfall and the moisture of the atmosphere, and preventing freshets in spring and autumn, and low streams in summer, by means of trees, will quietly come down to terra firma, and see pines, chestnuts, oaks and others timber trees grown upon our lands as beautiful and profitable crops. They may then learn that the rise of water from and its descent to the earth is governed by laws not yet well understood. Utilize the forest, waste and cheap lands, by growing timber trees, not ninety and nine nearly or quite worthless trees to one valuable specimen. Cover the land with timber trees, and this will make such lands profitable, and if it also makes the rain and rivers answer their purpose better, then this will be clear gain. While foolish statements and false figures are put forth, and ridiculous laws are proposed, relative to forestry matters, it is encouraging to notice that the forest commission, designated by the National Academy of Science to recommend legislation in regard to the Government's forest reserve, has issued an official report full of sense. When we can secure official reports upon forestry filled with important facts, correct principles and truthful figures, we may hope to see the science and art of forestry make rapid advance. The landowners need to be taught how to grow timber as a crop.

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Fifteen Years of Torture.

A Sufferer from Inflammatory Rheumatism Finds Relief after Years of Misery.

From the Press, Cleveland, Ohio.

Mr. William Wilson lives with his wife at No. 104 Roy Street, Cleveland, Ohio. He is 68 years old, a machinist by trade, and he was until recently employed by the Globe Iron Works Company. Though almost on the eve of the allotted threescore years and ten, he still apparently has many more to live, though his constitution has been somewhat impaired by the onslaught of inflammatory rheumatism.

When he was requested to give an account of his recovery, Mr. Wilson responded with a very interesting story.

"I have had inflammatory rheumatism for fifteen years. What I have suffered no one but myself and my good wife know. Although during those fifteen years there would be periods of relief yet the pain and soreness were always present. During damp weather I suffered most severely. At such periods I was totally incapacitated from work of any kind. I was simply a cripple and was absolutely helpless. The inflammation affected every part of my body. My knees, however, gave me the greatest trouble, as they were swollen to twice their size, and were much inflamed. At such periods it was necessary for me to remain in bed, or sit up in an easy chair propped up with pillows and cushions.

"My condition gradually became much worse with each recurring attack, and the last year it was the worst of all. I was so ill that three doctors were called and were at my bedside most of the time for several days. They were unable to help me, however, and I was ready to give up in despair.

My wife, too, was losing all hope. After the doctors had given up the case, she happened to read about Dr. Williams' Pink Pills, and as an experiment purchased a box of them at Acker Bros.' drug store, at the corner of Pearl and Detroit Streets, little thinking what a boon they would prove to be.

"By the time the box was nearly used up I noticed some improvement in my condition. The inflammation had receded and the pain which had made sleep at night well nigh impossible became less. I tried another box and continued to get better. Then the third box was bought, and that was enough. I was cured. Dr. Williams' Pink Pills did it, and I am always happy to give them the credit. When they can do what good physicians fail to, one cannot bestow too much praise upon their excellent qualities. I hope other sufferers will profit by my experience."

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Farmers' Clubs.

CONDUCTED BY A. C. BIRD.

All correspondence for this department should be addressed to A. C. Bird, Highland, Mich.

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THE FARMERS' CLUBS AND THE GRANGE.

One of the most pleasing events in the history of farmers' organizations was the fraternal assembling under the same roof last December of the two great organizations, the State Association of Farmers' Clubs and the State Grange. For two days mutual courtesies were exchanged, mutual plans formulated, and mutual friendship "now and forever" pledged in all the sacredness which common experiences, common interests and a common mission could inspire.

This happy condition of affairs consummated in a joint conference between committees of five members from each of the two bodies. At this conference the future policies of the two organizations were freely and fully discussed, and wherever practicable a union of forces arranged for future work. A spirit of perfect harmony prevailed throughout, and we will vouch for the statement that not a suspicion of lurking hypocrisy or hidden jealousy entered the mind of any one of the ten men in that council.

Since that meeting five months of the most intensely active work on the part of both organizations have elapsed and yet we hesitate not to also vouch for the further statement that this harmony still prevails and has prevailed every moment of the time intervening.

Why then can men stoop so low as to attempt to create discord where such perfect harmony exists, to excite suspicion and strife where all has been open and peaceful, to stir up jealousy and warring rivalry where mutual confidence and unity of purpose are so indispensable? Our answer is simply this: That no man who is true to both, or to either, of these great organizations could do this thing. No man who truly desires to serve the people of this State, no man who has honestly at heart the welfare and advancement of the farmers of Michigan, no man who places the public weal above his own selfish, narrow and mean ambitions, either could or would be guilty of an act so despicable. And when without a particle of evidence to sustain his position, and with every means at his immediate disposal to unquestionably determine the falsity of his statement, a member of the legislature, for the purpose of saving a pet measure from defeat, deliberately asserts that the opposition to his measure arises from jealousies between the Farmers' Clubs and the Granges he deserves little charity when his case again comes before the people of his district, or perchance before the people of the State whether his ambition seemeth at present to trend.

REPRESENTATIVE KIMMIS AND THE MICHIGAN MANUALS.

When the Perry resolution authorizing the publication of sixty copies of the Michigan Legislative Manual for each member of the House and eighty copies for each member of the Senate came up for consideration last week, Representative Kimmis offered an amendment providing that the number be reduced to one copy for each member of the legislature. In support of his position he quoted Section 15 of Article 4 which reads: "Each member shall be entitled to one copy of the laws, journals and documents of the legislature, but shall not receive at the expense of the State, books, newspapers or other perquisites of office not expressly authorized by this constitution."

Under this provision Representative Kimmis logically urged that it was plainly unconstitutional to make any allowance exceeding the one copy therein provided for.

But the members could not forego the opportunity, be it unconstitutional or otherwise, to provide themselves at the State's expense with the valuable campaign ammunition which the discriminate distribution of these expensive red books furnishes them, and they voted down the amendment. Among the ten affirmative votes we were especially pleased to notice that of Speaker Gordon.

WHOM WILL THEY SERVE?

During the past three weeks the feeling has become general that the Senate has been devoting much time and generous consideration to the seductive promises and covert threats of the county officers and their friends. Senators who four weeks ago, as business men legislating for the people of a great State, were enthusiastic in their support of the county salaries measure, are now, as peanut politicians, legislating for the spoils seekers, growing cold in their support of that which appeals to their every business instinct.

To such we have simply this to say: We have no further arguments to offer to convince you of the real businesslike merits of the bill, for you were long since convinced on that point. We have no further appeals to make in behalf of the overburdened taxpayers in whose interest this measure has been urged, for you are already fully cognizant of the fact that the whole people of this great State, barring the officeholders and spoils seekers, are demanding its passage. We have no promises of contributions to campaign funds to assist you in your further political aspirations, for the other fellows have a monopoly of that stock in trade. We have not even any threats with which to intimidate, for the taxpayers of this State are a practical businesslike people who act when the proper time comes and waste no energy in threatening punishment for the future.

It is yours to make the choice as to whom ye will serve, the people or the officeholders, the unquestionably legitimate demands of the taxpayers or the unquestionably selfish and iniquitous demands of the spoils seekers.

TWO GOOD MEASURES.

Among the many good measures which at the present writing seem doomed to defeat at the hands of the present legislature none are more worthy of a better fate than that set forth in the bill introduced by Representative Campbell limiting the right of appeal from lower to higher courts and that embodied in the Wagar bill which provides for a readjustment of the salaries paid to department clerks.

Both of these measures, like unto the Kimmis county salaries measure, appeal directly to the business instinct of practical men. They would create hardship for no one. They are in the interest of no class. Their enactment is urged by the whole people, and their merit is unquestionable.

Why does the legislature turn a deaf ear to such reasonable demands? Will it be always thus? Who has a solution for the problem?

LEGISLATIVE NOTES.

The Senate bill repealing the taxation of mortgages was formally killed by the House last week. Another victory for the people.

The friends of the appropriation for State Farmers' Institutes were rejoiced by the passage by the House of the once defeated Graham bill appropriating \$11,000 therefor for the next two years.

The Kimmis amendment reducing the allowance of copies of the expensive legislative manual to one to each member of the legislature met with defeat, but could the people have voted, the majority in its favor would have been overwhelming.

THEY CONTINUE TO WORK IN HARMONY.

The report is being circulated that the Association of Farmers' Clubs and the State Grange are no longer working in harmony. That such a report should be given out and that it should find those ready and even anxious to give credence to it, is not surprising when the fact is considered that there are those whose selfish interests would cause them to rejoice with exceeding great rejoicing could they but know that these two strong and useful organizations

of the farmers of the State were no longer working in unison for the improvement of the conditions of the farmer and for the protection of his interests.

Never before in the history of the State have the farmers been so well conditioned to care for their own interests as at this present time, and it is through the medium of these organizations, and through these alone, that this condition has been reached. And knowing this, the farmers will not lose sight of the important and vital truth, that discord, with a spirit of jealousy and unfriendliness, will most assuredly rob them of these benefits.

But the report, above referred to, has no foundation in fact. It is but an idle and evil-purposed rumor.

The Association of Farmers' Clubs and the Grange are composed of a membership possessed of too much good, hard sense to antagonize each other and thereby lose rich opportunities just coming within their reach.

Let this one thing, then, be ever kept in plain view. The Farmers' Clubs and the Grange, though organized differently, yet have they one and the same object in view, namely, the bettering of the condition of the farmer, and this most worthy purpose will not be lost sight of nor forgotten.

Let, then, those who fondly hoped that discord would come between these organizations, and thereby their own cause would be advanced, rest assured that they are doomed to sad disappointment, for such is not and will not be the case.

J. T. DANIELLS.

REPORTS FROM LOCAL CLUBS.

WEBSTER FARMERS' CLUB.

The Webster Farmers' Club, of Oakland, met May 5th at the home of Mr. and Mrs. John Cotcher. Considering the busy season and the many hindrances there have been of late, there was no reason to complain of the attendance. There were twenty present and an addition of three new members. After the literary part of the program the question, "How to raise corn successfully," was discussed. S. C. Elwood led. He would first manure his potato ground, then all that is left he would use on his corn ground. If it covers it, all the better. He prefers sod for corn. Plows to a depth of seven inches. Works the ground thoroughly. Plants to a depth of three inches with planters. Rows three feet ten inches each way to admit of cultivating twice in a row.

W. E. Carpenter's plan was much the same, but he had been troubled greatly with gophers for a number of years, and he rolls his corn in coal tar and plaster. He plants with hoes, as he does not think a planter drops it evenly. They all like the plan of dragging the corn to destroy weeds before it is large enough to cultivate. Mr. Seamark told of his first experience in dragging corn. He said a slicker man never followed a drag; but he commenced and thought he would finish. Some hills were broken over. On some the leaves were shredded, but they all came up in time and did well. Mr. Northrop said he always dragged his corn, but he never dared look back. Mr. Emery drills his corn. Has a 13-hoe drill. Plants two rows at a time, and turns and goes back in the wheel marks, thereby doing away with marking the ground. The county good roads system met with a cold reception. They are not in favor of anything that will make the farmers' taxes any higher. Think the old system would do, providing the work was thoroughly done and no time wasted.

Resolved, That the members of the Webster Farmers' Club are opposed unanimously to either the State or county good roads movement, or any other movement that requires a heavy tax levy, but would favor any improvement that can be made to the township system. After discussing the question box the meeting adjourned to meet June 2 at Mr. and Mrs. W. E. Carpenter's.

We shall discuss the Association question. MRS. T. SEAMARK, Cor. Sec.

GENOA FARMERS' CLUB.

Notwithstanding a very rainy day there was a fair attendance of the club on the first day of May at the home of Mr. and Mrs. Henry Schoenhals. After dinner a pleasing literary program was given. The selections rendered by the Genoa male quartet were especially enjoyable. The Association question was then taken up.

T. J. Conely: The road scraper is a very fine thing to use if we keep the roadbed well rounded up and wide enough for two teams to travel abreast. Work the roads thoroughly when they need it. Wm. Fishbeck: Dig a trench in the middle of the road, lay small cobble stones smoothly and level in the trench, then cover with dirt, or gravel, if you can get it. Clay is pretty good to draw onto sandy roads. J. Rider: I do not agree as to using scraper. I think it is not used soon enough in the spring. J. Larson: I think the law is good enough if the men will work as well as talk.

Adjourned to meet at the home of Frank Metz the first Saturday in June.

MRS. T. J. CONELY, Cor. Sec.

NORTH SHADE FARMERS' CLUB.

The regular meeting of the North Shade Farmers' Club, held at Mr. H. Blair's, May 7th, was well attended. Vice-President S. C. Hull called the club to order.

The first subject discussed was "Dairying as a business." Mr. Orrin Ranger thought dairying, if carried on right, is more profitable than farming.

Mr. Swigart: "If I should give my experience it would not be favorable to the business."

Mrs. Todd: "My experience has been that we can realize more profit from selling cream than either butter or milk."

Mr. Franklin: "I do not like the way

the factories have been carried on; there is too much swindling."

A carefully prepared paper was read by Miss Mary Franklin on "The relation of the school to the home." She said education only begins and ends with life, and that we should be careful how the child is trained. Her idea was that all teachers should have some Normal instruction before entering upon their work.

Mr. Dobson then gave some reminiscences of pioneer life in Gratiot county. He could remember of borrowing enough of the staff of life for one meal and did not know where the next was coming from.

The question box was answered, and the club adjourned to meet the first Thursday in June at John Swigart's.

ROY CUSHMAN, Cor. Sec.

WALLED LAKE FARMERS' CLUB.

The Walled Lake Farmers' Club met at the residence of Mr. J. Carpenter. It was practically the best meeting we have ever had. Everyone was interested, and all took hold of the discussions.

T. C. Severance Jr. read a paper that brought out several sensible truths. He first told a story of a barrel of rotten apples with tainted surroundings. The apples thought that if they could get into cleaner quarters they would be all right. They were put in a new barrel in clean quarters, but soon tainted everything around them and were no better off than before. Thus it is with certain classes of the farmers. They think if they could only get into position to run the government they would be right in heaven. But if they were good at something outside of their sphere that would not necessarily make good farmers of them.

It needs an educated mind to run a farm. They must be trained from their childhood if they form characters that bring success. It needs educated mothers to train children some cannot see that a woman needs an education. One man once asked his advice as to whether he should send his daughter off to school or not. If he thought that she would get married as soon as she graduated he would not waste a cent on her but put her out to work earning money in preparation for that event.

If children were brought up to be scrupulous in small dealings, to respect the rights of others, to be guided right morally, there would not be so much need of fighting against the money-grabbers and saloons. Children should be taught to deport themselves properly in public, the necessity of which can be seen in our own community, among some of the young people who gather at our Sunday evening service. They show respect for neither man nor the Almighty. Home is not necessarily a house, but a place where love reigns from cellar to garret.

John Law read a paper on the question "How can we best improve our roads under the present system?" He stated that the roads should be kept dry. The center should never be torn up and the town should own two or three road scrapers.

Those who took part in the discussion were generally agreed with the paper. The discussion was general. There were two questions asked which elicited general discussion.

Mr. Ranour asked the privilege to inquire why all farmers' organizations failed. This was discussed till someone asked what the question was that was under discussion.

HOWARD SEVERANCE, Cor. Sec'y.

RAISINVILLE AND IDA FARMERS' CLUB.

Friday, April 30th., the farmers' club met at James Thorn's and though rainy the club was largely attended. After the minutes of previous meeting were read, the question "Has the policy of the government in opening up lands for settlement not been detrimental?" was opened by John Nichols. He thought it was on account of using the lands for speculative purposes. But the majority of the club thought it a benefit to the government and to the settlers in helping to pay taxes. "What are we going to do to prevent ruinous prices?" was opened for discussion by James Thorn; a lively war in foreign countries, the making of gourmands of ourselves, and the production of our own wool and sugar were the ideas brought out.

The question for the ladies was opened by Mrs. Justus Sator. "To what extent should farmers' wives and daughters follow the fashion?" It was discussed by a number of the ladies who thought they should keep in style as best they could and not spend so much time as not to have time to improve the mind and care for the chickens. MERTIE N. KRING Cor. Sec'y.

WEBSTER FARMERS' CLUB.

Of the many history of this organization, few of its meetings have been held under more pleasant circumstances than on Saturday, May 8th, at the home of Hon. Wm. Ball.

A well tilled farm, commodious and conveniently arranged buildings, stock well bred and fed, fresh green fields and trees, with balmy air combined to make our hearty welcome unusually agreeable. In addition the hopeful expression by word and countenance of almost all the members regarding the business outlook was exceedingly encouraging. A recitation by Mary B. Merrill, the little daughter of our president, portraying in pretty verse "grumble corner and thanksgiving street," and a paper by W. D. Smith, on the necessity of "watchfulness" each tended to inspire hopefulness for future prosperity of the farmer.

Mr. Smith spoke from a goodly number of years of observation and experience in urging the necessity of watchfulness all along the line, not only in business affairs as farmers, but also in our relationship to our country.

Cyrus M. Starks testified, through his knowledge of history, to the sad results of neglect of watchfulness.

Hon. Wm. Ball felt that watchfulness

had been carried on to excess. To him, doing was the watchword. "Let us cease our criticisms and fault finding," he said "and instead let us be doing. Periodical depressions will cross our paths, and we must meet them. We are now on the eve of a period of prosperity and should gather courage. A belief exists that the farmer has been going down hill and that no other class has done so. This is not true. The farmer is as well off as any class."

E. A. Nordman deplored that our hind sight is better than our foresight, and that in consequence the necessity has sprung up for a closer watchfulness on the actions of our public servants, their salaries, etc.

"What can be done to improve our roads with our present system?" was next considered.

Mr. Nordman saw some defects in the present system, yet considered it good. He wouldn't allow anything for use of plow, wagon and scraper, or use scraper before middle of May. Ought to have in mind permanency of roads.

Mrs. Chamberlain confessed to the use of emphatic language when she saw roads across low flat grounds without ditches on either side. Some proposed diverting dog tax to benefit of roads. Others advocated broad-ire wagons, and fewer stories and more work. Others would get more help from cities and bicycles, etc. Others felt a sense of injustice that teamsters who pay not a cent of tax should be allowed to ruin the roads with narrow tires and heavy loads.

An invitation from the Salem Club to meet with them at the residence of Isaac Sanery, on the second day of June next was unanimously accepted and a determination generally expressed to show our appreciation by being present.

B. C. REEVE, Cor. Sec.

CLYDE AND GRANT FARMERS' CLUB.

On May 5th the regular monthly meeting of the Clyde and Grant Farmers' Club was held at the home of Mr. and Mrs. B. D. Smith, of Clyde, President D. Beard presiding.

After a short program the State Association question was taken up. Allen Atkins, Sr., gave some practical ideas on drainage, the principles of which he thought, from the imperfect manner in which it is often done, not very well understood.

Allen Alken coincided as to drainage. Considers the present law sufficient if properly carried out, which idea was approved by several members.

H. Kingsly and F. A. Beard thought a cash tax preferable, and David Beard, road commissioner for Clyde, thinks an equal amount of work could be done with one-fourth the amount of money if systematically applied.

David Atkins, supervisor of Clyde, considers taxes as at present levied about all people can stand.

The question though largely discussed was by no means exhausted, and will no doubt furnish our members food for thought.

Resolutions were adopted with reference to the death of Mrs. Henry Cook, an active member of the club.

The June meeting will be a picnic on the banks of Black River under the care and management of F. A. Beard and wife. It being our regular children's club day, special entertainment will be prepared for all our young people. MRS. OSCAR MEYER, COR. SEC.

LINDEN AND ARGENTINE FARMERS' CLUB.

The Linden and Argentine Farmers' Club met at the home of Mr. and Mrs. M. J. Harris, of Linden, on Saturday, May 8th. The meeting was called to order by the president.

The program consisted of an interesting talk given by Mr. E. Leonard on "Taxation of Mortgages." This was followed by discussions, after which a vote was taken in favor of continuing the taxation of mortgages.

A paper entitled the "Blessings of Hard Times" was read by Mrs. M. J. Harris. There were many blessings enumerated but she gave as the principal blessing, the learning of the lesson of economy.

The next was a question box which contained some valuable questions, and called forth quite a number of discussions.

It was decided to hold the next meeting at the home of Mr. and Mrs. Albert Fletcher.

COR. SEC.

SEVILLE AND SUMNER FARMERS' CLUB.

The meeting of Seville and Sumner Farmers' Club for May was called to order by the president at the residence of Mrs. Geo. Gee on May 6th. The principle feature of the meeting was the discussion of the lessons of the Round-up Institute.

For lack of time the Association question was laid on the table. An expression of the Club was given favoring immediate steps being taken to organize a county association of farmers' clubs. The corresponding secretary was instructed to communicate with kindred organizations in the county for the purpose of getting the general sentiment along this line. An expression was also given favoring the selection of one county paper from each of the dominant political parties, to be known as the official organs for all farmers' club work in the county.

The meeting then adjourned to meet the first Thursday in July at the residence of Mr. and Mrs. Wood, of Arcadia township.

COR. SEC'Y.

PINE RIVER FARMERS' CLUB.

The May meeting of this club was held at the home of Mr. and Mrs. J. Henry, with nearly every member in attendance. After the usual opening exercises the question box occupied the time of the forenoon session. The afternoon exercises opened with a paper entitled, "The Two Mothers," by Mrs. F. M. Freer. She drew a very perfect picture of the bright and the dark side of life, showing how the home may be made a paradise for children or the other

extreme reached. This paper brought out a very enthusiastic discussion.

Mrs. Curtis followed with a paper on "The Practical Side of Life."

A paper by A. C. Henry on "Artichokes" brought out his belief that the chief value of the crop was its use for hogs kept for breeding purposes. He gave methods regarding the handling of the crop and its relative value compared with other root crops.

A fine general program was interspersed among these papers.

Adjourned to meet with Mr. and Mrs. Abbott the first Thursday in June.

O. F. MAY, Cor. Sec'y.

HOLLY CENTER FARMERS' CLUB.

The last regular meeting of the Holly Center Farmers' Club was held at the home of Mr. and Mrs. John Shields, April 29th.

After the usual literary exercises the question for the day was discussed which was "In what ways can we practice greater economy on the farm?" Many good ideas were brought out in the discussion of which we give the following: That while all farmers are trying to practice economy yet anyone riding through the country can see many ways in which farmers could save money in securing their crops in season, more especially the corn crop, which is often left out nearly all winter; in making use of their leisure hours during the winter in repairing machinery, fences, buildings, etc.; that if farmers would only learn to economize their time, that farm work could not only be done in season but everything about the farm be kept tidy and in good repair; that all should learn the difference between true and false economy; that there is no economy in underfeeding stock; there is more money made from one head of stock properly cared for than from two or three improperly cared for.

After the discussion Mr. Nathan Elliott, who has just returned from his visit in Louisiana, gave the club a very interesting talk on farming in the southern States. He gave a description of the country, nature of the soil, the manner of planting, raising and harvesting tobacco, sugar cane and cotton.

The next meeting will be held at the residence of Mr. and Mrs. Handy Austin the 1st Thursday in June.

COR. SEC.

EAST BLACKMAN AND WEST LEONI FARMERS' CLUB.

Meeting called to order by the president at 11 a. m. After hearing the report of the secretary the club adjourned until after dinner.

After the program, Mrs. Madden gave a recipe for an ever ready shortcake: Make a crust as for biscuit, make enough for several and put them away; when wanted, steam them and spread with butter and put in your berries; in this way you can have them on short notice. The ladies that are to give recipes or something beneficial for the club are Mesdames Birch, Lowden, Gear, Daniel, Crafts, Cooley, Mrs. William Beebe was appointed second assistant reporter. The question for the day was: Should mortgages be taxed? Mr. Buchink thought they should be, and the holder pay the tax. Messrs. Nichols, Cooley, Beebe, Hawkins, McClure thought they should not be taxed as it made money dearer, they think the method of taxation is at fault. Club voted that the mortgage tax be left as it is. Question box full as usual. One of the most important ones was: By what fraud are the farmers most injured. One of the greatest frauds is the manufacture of oleomargarine. Mr. Nichols read a very good piece on the manufacture of it.

Motion was made that we meet from this on at 1 p. m. until further notice. Supper at 4 p. m. Question for the next meeting: Resolved, That the board of trade is the greatest injury to the farmer. Adjourned to meet at the home of Frank Lowden, May 20.

MRS. EVA COOLEY, Asst. Reporter.

ARGONAUT FARMERS' CLUB.

In the discussion at the May meeting of the association the question for the month a marked interest was manifested.

The discussion was led by Messrs. Richardson, Johns and Durfee, who were in favor of each district assuming a prerogative, placing its work in the hands of some one man to be done by him and the district paying him for that work; it was thought the work resulting from such a plan would prove much more efficient.

Mr. Hazen would have every district own a road scraper and use it, not just sufficient to work out their tax, but donate the work when the condition of the roads required its use. The district in which he resides owns one that is fashioned in the form of a triangle and consists of two planks with a steel bar on the shorter; this has been used often this spring—the district donating the work—and the result is a nicely rounded roadbed which is a thing of beauty and they intend it shall be a joy forever.

Messrs. Dunham and West thought that roads worked the present way are all right providing the men worked and not idled their time away while there.

U. A. Tibbits was in favor of the road scraper, as a portion of road in his district where the scraper had been used was a road one might feel proud of. He would like to see the law amended until it called for a day's work for every four hundred dollars valuation in place of the regulation eight hundred dollars.

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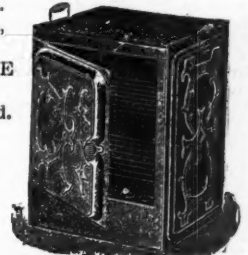
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VESICAL CALCULI.—I have a horse 15 years old that has difficulty in urinating. He has been troubled about six months. He passes but little urine, at times mixed with blood. He appears in good condition; is fat and looks well. I am working him now. What shall I do for him? P. P. Vernon, Mich.—Give two drams nitrate of potash twice a day in feed. Give him one pint boiled flaxseed twice a day. Feed him plenty of grass. Work will do him no harm.

FLIES TROUBLE HORSE.—I have a mare that is troubled with flies during fly time. The flies cause swellings on the skin and body. They cause her to itch. She bites herself, causing sores. In the fall when the flies disappear, she is all right again. Does she need medicine for her blood, or a remedy to keep the flies away? G. C. Ypsilanti, Mich. The Shoo-Fly Manufacturing Co. sell a remedy to keep flies off animals, which is advertised in this paper. I have no doubt that you will find it a very valuable remedy in the case of your mare. You had better write them. I do not think that your mare requires medicine.

ABSCESS ON UDDER.—I have a cow that has a growth on the back part of the udder about as large as a hen's egg. It is now discharging bloody matter. I first noticed it at the time of calving. It has been continually growing ever since. What would you advise me to do with her? I have stopped using her milk; am feeding it to calves. Will it hurt them? F. W. R. Ransom, Mich.—Apply one part creoline to 20 parts water three times a day. If the abscess does not have proper drainage, make a larger opening. Use a syringe in making the application of the medicine. The milk should not be used, especially that which comes from the quarter of the udder affected.

CHRONIC GARGET.—I have a sow one year old. I weaned pigs four weeks ago. When she went dry I noticed that the fore part of the udder on the right side was full and rather hard and has remained so. The bunch is about as large as a quart measure; does not seem to be sore or painful. She appears healthy and in good condition. She has been bred again. I have been taking your valuable paper only a few weeks, but have received quite a good deal of help from it so far, and thought that I would trouble you with this query. R. E. K. Milton, Mich.—Apply tincture of iodine once a day to the swollen udder and your sow will very soon get well. Be particular to give her a smooth, soft bed to lie on. She should not lie on cold, damp ground.

SWEENEY.—Is there a remedy for a case of sweeney of four months' standing, without giving an animal absolute rest? What course of treatment would you recommend me to try for a horse that must be constantly employed at general farm work? Please be quite specific in your reply. J. E. I., Grass Lake Mich.—If your horse is not very lame it will not be necessary to give him any rest, and, on the contrary, moderate exercise and work will prove beneficial. The disease being a weakened condition of the muscles, it would be necessary to give an animal a certain amount of work in order to develop and reproduce the muscles to their normal state. Apply equal parts caustic balsam and raw linseed oil to atrophied portion of shoulder once a week and he will get well.

BONE SPAVIN—SITFAST.—I have a three-year-old colt that has never done any work. She has a soft swelling on hock joint. I think that it is a bog spavin; came on during the winter. What can I do for her? I also have a six-year-old mare that has small, hard lumps about the size of a hickory nut on shoulder where the collar comes and a little below where the draught comes. Several other larger and smaller lumps have appeared just under the skin and seem fast to it. I did not work her during the winter. She runs to pasture now with the other young horses. I feed millet during the winter, seed hulls in head, cut before ripening. I do not think that feed caused it. L. J. N., Ithaca, Mich.—Blister bog spavin with caustic balsam once a week. Remove the sitfast with a knife. It is best done by opening through the skin and dissecting out the small bunch. Then the skin will soon heal. Apply one ounce sulphate zinc to one quart water three times a day to sores on shoulder.





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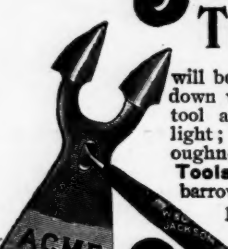


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